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CHARGING FOR AMBULATORY CARE
IN MILITARY HEALTH CARE FACILITIES:
AN EVALUATION AND ANALYSIS

A GRADUATE RESEARCH PROJECT SUBMITTED
TO THE FACULTY OF BAYLOR UNIVERSITY IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF HEALTH ADMINISTRATION

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I. INTRODUCTION

Development of the Problem

In 1966, Congress created the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) in order to subsidize, through cost sharing, a program of medical benefits. These benefits, provided by the federal government under public law, are available to a large number of specified individuals by virtue of their relationship to one of the seven uniformed services.

Monies used by CHAMPUS are appropriated funds furnished by the Congress through the annual appropriation acts for the Department of Defense and the Department of Health and Human Services. Funding levels required to maintain this program, however, have grown to astronomical proportions.

In fiscal year 1982, \$966 million were appropriated for CHAMPUS.¹ By early July, however, it was certain that an additional \$10 million would be required in order to meet fiscal obligations for the remainder of the year.² After several budgetary reprogramming efforts, CHAMPUS survived the year.^{3,4,5,6,7} It became obvious that fiscal year 1983 funding, as originally programmed, would also be inadequate.

Efforts to prevent this shortfall were immediately initiated. These efforts included:

1. Restricting the issuance of nonavailability statements (required before patients can seek civilian inpatient care under CHAMPUS).^{8,9,10,11}
2. Expanding access to military medical care and enlarging the catchment area of the service population.^{12,13}
3. Making private insurers the first payer (CHAMPUS second) for active duty dependents (formerly only required of retirees).¹⁴
4. Contracting of deficient health services.¹⁵
5. Easing the criteria for the use of ambulatory surgery under CHAMPUS.¹⁶
6. Testing, in Florida and California, a program which requires the

issuance of a nonavailability statement prior to obtaining any civilian health care (outpatient as well as inpatient care).^{17,18}

In addition to these efforts to reduce CHAMPUS outlays, Congress increased funding for the CHAMPUS program. In the continuing resolution for fiscal year 1983, Congress increased CHAMPUS funding by \$120 million.¹⁹ This additional funding, together with anticipated reductions in CHAMPUS usage, is hoped to offset an estimated deficit of \$200 million. The CHAMPUS funding for fiscal year 1984 has also been increased. Congress has programmed \$1.46 billion for fiscal year 1984 CHAMPUS funding, \$264 million more than fiscal year 1983 and \$384 million more than that originally requested by DOD.²⁰

Another method which has been considered for reducing CHAMPUS appropriations is that of charging a fee to all outpatients (less active duty) treated in military health care facilities, with resulting income used to subsidize CHAMPUS. This proposal, calling for \$5.00 per visit as submitted by Senator Daniel Inouye (D-Hawaii) to the Senate Appropriations Committee on Defense, has been temporarily shelved.²¹ The concept, however, is receiving intense consideration. The House Appropriations Committee in December of 1982 estimated that charging such a fee could result in revenues of \$130 million in fiscal year 1983 alone and stated that "as a restraint on excessive and unwarranted demands for medical and dental care, the committee recommends that the Secretary of Defense impose uniform minimal charges for outpatient care."²²

Authority for imposing such a fee currently exists. In Title 10, United States Code, Section 1078(b), the following is reflected:

"As a restraint on excessive demands for medical and dental care under section 1076 of this title, uniform minimal charges may be imposed for outpatient care. Charges may not be more than such amounts, if any, the Secretary of Defense may prescribe after consulting the (when written) Secretary of Health, Education, and Welfare, and after finding that such charges are necessary."²³

Charging for outpatient care in military medical treatment facilities may have a significant impact on health care delivery. The problem which will be

discussed herein, therefore, is to determine the implications of imposing a "nuisance" or "clinic" fee on military beneficiaries in the military health care system.

1 Paul Smith, "Proposed Cuts May Reduce Number Using CHAMPUS," Navy Times, 12 July 1982, 4.

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9 Paul Smith, "More Curbs Planned on Use of CHAMPUS," Navy Times, 8 November 1982, 3.

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11 Paul Smith, "New Rules to Cut CHAMPUS Use, Reduce Costs," Navy Times, 22 November 1982, 6.

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Literature Review

Utilization Behavior and the Demand for Health Care

Despite numerous studies in health services organization and utilization, no common theory explaining health behavior and the demand for health services has become widely accepted. Rather, what has emerged is a loosely structured framework derived from various research endeavors which supports some hypotheses while discounting others. A discussion of various approaches follows, with a sampling of work done in each. (See Appendix A for a summarized list of factors, by author, which affect health care utilization.)

Economics.-- Conceived under the impression that health care responds to the same market forces as consumer goods, economic influence on the demand and utilization of health services is predominant in the literature. There exists, however, differing opinions on the effects of economic conditions on utilization.

Rundall and Wheeler¹, for example, discuss the direct relationship in the early sixties between income and the utilization of health services. They go on to show that this relationship has now taken on a U-shaped relationship with high and low income families demanding more health services than those in the mid-income range.

Kleinman², in evaluating the effects of income on utilization, revealed that after adjusting for age and health status, the poor use less health services (7-44% less) than those with incomes at twice the poverty level. Also, after these adjustments, blacks had fewer outpatient visits than whites.

Hadley and Osei³, in reviewing the effects of income on mortality, concluded that those with higher incomes had lower mortality rates. This conclusion refuted earlier assumptions that those with higher incomes had higher mortality

rates due to stressful life situations. The better general health status of the more wealthy appeared to be the influencing variable.

Aday⁴ points out that income or net cost in dollars is not the only economic barrier to access to care. Time, in the form of long queues and travel distance, must also be considered.

Newhouse et al⁵, in looking at National Health Insurance, supported the concept of time and money in evaluating economic factors. They showed that a 10% increase in travel time resulted in a 10% decline in demand. A 30% increase in waiting time also caused a 10% decline. The opposite, however, was found in the unemployed and retired who are "time rich" but "dollar poor."

Support of the effects of distance and travel time was also presented by Weiss et al who demonstrated that an increase in distance between patient and provider acts as a barrier to utilization. They also concluded that white people and the highly educated were more likely to travel further. Other factors such as disease, occupational status, sex and age appeared to have little effect on travel patterns, whereas an effect did result from various organizational constraints of the health care facility.⁶

Apostle and Oder⁷, in their research, found that more than 9% of a sample population had no contact whatsoever with a physician in the past year due to economic factors. This absence was present despite numerous occasions where health care utilization was indicated.

Berki and Kobashigawa⁸ postulate that income does not have any direct effect on utilization. Its indirect effect is to reduce chronic morbidity and, therefore, reduce the need for utilization. This postulation would result in an inverse relationship between income and utilization with the poor having high utilization and the rich low utilization.

Joseph⁹, in evaluating the impact of individual health care expenditures

rather than income, found severe drawbacks with the structure of the health care industry. Individual patients are sometimes charged different prices for the same product or service. This price inconsistency makes price elasticities and cross elasticities of demand for health care difficult or impossible to estimate.

Health Status.- Kirsch et al¹⁰, Detwiller¹¹, Berki and Kobashigawa¹², Joseph¹³, Jackson and Greenlick¹⁴, Leveson¹⁵, and others all emphasize that health status is the key to health care demand. Whether it is individually perceived symptoms or a worried-well demand for preventive care, health status initiates the delivery encounter. There are many factors, however, which influence perceived health status and may inhibit or precipitate the delivery encounter.

Stratmann¹⁶ lists the following factors as determining the need for health care utilization:

1. Economic factors - utility of money, cost
2. Temporal factors - utility of time, waiting and travelling
3. Convenience factors - utility of convenience; parking, number of doctors, elevators, etc.
4. Sociopsychological factors - utility of sociopsychology values; ethics, honesty, staff manners, appearance, language, cleanliness, etc.
5. Care quality factors - utility of the quality of care; physician competence, equipment availability, number of staff, length of visit, etc.

Hennelly¹⁷ provides three factors that influence the decision to initially seek care. These three are the patients' payment method, the severity of illness, and his referral status.

Mullooly and Freeborn¹⁸ lists age, sex, socioeconomic background and health status as determining factors. They imply that length of membership or affiliation with a health care organization or provider does not effect utilization.

Berki and Ashcraft¹⁹ provide different determining factors for different

care. They conclude that:

1. Need, price, and access to providers are the principle determinants of illness related visits.
2. Access, health concern, and price are the predictors of preventive visits.
3. Illness related and preventive visits, to some extent, are substitutes for one another.

Berkanovic and Reeder²⁰ conclude that ability to pay is the major determinant of the utilization of health services once symptoms are perceived as serious. They state that cultural and sociopsychological factors, once thought to account for much of the observed variations among social classes and ethnic groups in their utilization behavior, are largely irrelevant. Rather, they influence the perception of symptoms for which medical care is sought.

Anderson²¹, on the other hand, includes such factors in his list of determinants. He lists:

1. Demographic factors
2. Health Care Organization/Provider factors
3. Ecological factors
4. Socio-psychological factors

He goes on to state that the supply of hospital beds is a major determinant of utilization within a geographic area and that inpatient hospital care is substituted for ambulatory care in areas where the physician to population ratio is low.

In another study with Bartkus, however, Anderson agrees that symptom sensitivity has social and cultural correlates. In contrast to the previous study, demographic and ecological factors were found to affect utilization only indirectly through their effect on intervening socio-psychological variables.²²

Leveson²³, in a study on access to care, concludes that education is inversely related to the number of ambulatory visits. He also states that the

cost of care is not a factor if service is felt to be unsatisfactory. In fact, in his study, care provided free did not entice patients that were previously dissatisfied with that same care at a cost.

Patient satisfaction with care has also been shown to be a factor in health care utilization by Hulka et al²⁴, Ward²⁵, Wolfe²⁶, and Rethmeier.²⁷ The impact is felt in not only individual perceptions concerning care, but also in the general community attitudes regarding acceptance of the health care facility or provider.

Nutting et al²⁸ concluded that the size of the organization had a strong negative relationship to a perceived quality of treatment and, as such, a negative influence on health care demand. Payment mechanism, they asserted, showed no relationship with quality perceptions.

Weiss and Greenlick²⁹, in comparing working class and middle class patients, determined that working class people had 24 fewer visits (contacts) per hundred than middle class when both had the same access to care. Yet, they had four more visits per hundred for emergency room treatment than did the middle class. No inference was made, however, of individual characteristics which might account for these differences other than social class grouping.

A Blue Cross/Blue Shield report on cost sharing³⁰, research conducted by Showstack et al³¹, and a study conducted by Hadley et al³² all discuss the role of the physician in determining the demand for health services. Acting as both health care provider as well as health care advisor, physicians can actually create demand by referring patients (advisors) to a provider (themselves). It has been estimated that physicians direct as much as 70% of the expenditures for all personal health care services.³³

Insurance.- The impact of insurance on access to and demand for health care has been examined extensively in the literature. No one refutes the

assertion that because of health insurance, demand for care has increased. Several aspects of insurance related economics were reviewed. The first aspect encountered was that of "Moral Hazard."

"Moral Hazard" occurs when consumers demand more than that which is necessary. Freiberg and Scutchfield proclaim that "with insurance, ideal conditions require that the event being insured against is beyond the control of the individual being insured. However, this is not the case with medical insurance."³⁴

Military health care through the MHSS is highly conducive to this "Moral Hazard." Except for time, there is very little cost for military health care.

Complete, comprehensive medical care is the exception rather than the rule. Most insurance includes some deductible or copayment feature in addition to the premium. Copayments and deductibles serve to reduce the cost of health insurance. This cost sharing, however, may not reduce unnecessary use of medical services. Once deductibles are met, there are no financial incentives to discourage further use of services. In copayments, once the daily or unit payment is met, there is no incentive to reduce the total cost of the unit of service.³⁵

As Hardwick et al point out, deductible and coinsurance features do not serve any real deterrent function. There is no superiority over full service benefit plans unless the amount of the deductible or copayment is so high as to wisely discourage use.³⁶

Scitovsky and Snyder³⁷, in a 1972 study of the impact of copayments on a previously full benefit plan, found that physician services demanded (ambulatory visits) declined by more than 24%. Excluding minor complaints (which represented 22.5% of all visits), the decline was still 16.4%.

A follow-up study was conducted five years later in order to determine

whether the original decline in utilization was temporary.³⁸ This study, supported by Phelps and Newhouse³⁹, found no general upward trend; the decline remained persistent. Interestingly noted was the fact that ancillary services, which were all physician generated, did not decline.

In an unrelated study conducted in 1979, Scitovsky et al concluded that a 25% copayment feature introduced into an employee benefit program resulted in a 24% reduction in utilization during the year that followed.⁴⁰

Beck conducted similar research in Saskatchewan before, during, and after the implementation of patient copayments. He found an overall decline in utilization during the copayment period of over 7%. The poor, he found, reduced their demand by more than 18%.⁴¹

Wolfson et al discovered that in provider determined medical care need, copayments had no effect on the use of health care services, thus supporting that conclusion mentioned previously.⁴²

Roemer⁴³, in studying the effects of a new copayment feature in the California Medicaid program, found that ambulatory care utilization decreased after patients were required to share in the costs. After a brief period of time, however, inpatient utilization rates increased. He concluded (this conclusion was later asserted by Dyckman as being too casual and, therefore, invalid⁴⁴) that copayments inhibited the utilization of ambulatory care, especially in the poor, and that such inhibition later led to more serious medical conditions which required inpatient care. He stated that "it cannot be inferred that a patient's failure to see or delay in seeing a doctor for a symptom means that the visit was unnecessary or frivolous. It means only that the copayment inhibited the procurement of care whether medically advisable or not."⁴⁵

In choosing between insurance plans, Scitovsky et al determined that a copayment plan was preferred over more comprehensive plans in two instances:

when income was lower and when distance to a copayment provider was closer to the patient.⁴⁶

Moustafa et al found that most people were unaware of their specific insurance benefits. In evaluating the demand for specific types of insurance, he found that demographic characteristics had little effect on the type of insurance selected except that those with children favored more comprehensive plans.⁴⁷

Piontowski and Butler⁴⁸, in advocating the cost effectiveness of HMOs, assert that employees are concerned with two basic features of health care insurance coverage. These are, (1) the new cost to the employee or individual for insurance coverage and, (2) the degree of coverage. Individuals weigh the cost and their perceived risk in acquiring that coverage which they deem necessary.

Studies of Military Health Care

Many studies have been conducted which deal specifically with various aspects of military health care. The major points of some of these studies are presented here. (See Appendix B for tabular displays from some of these studies.)

The 1975 Military Health Study, conducted jointly by the Department of Defense, the Department of Health, Education, and Welfare, and the Office of Management and Budget, addressed issues concerning anticipated physician shortages, quality of systems for planning, management and evaluation, increasing overhead and support costs throughout DOD, and the social equity of military medical care and compatibility with national health care objectives. The study includes numerous workload projections, utilization rates, and cost

comparisons. The final report contained nine specific interrelated recommendations that deal with medical care delivered in CONUS military MTFs and by civilian providers financed through CHAMPUS. The recommendations were intended as long term guidance and were designed to provide a framework within which details of management and organization could be adapted to changing requirements and circumstances within and without DOD. One final recommendation, which impacts directly on this study states that:

"Consideration should be given to the feasibility of allowing dependentsto select a health care program other than that provided in the MHSS."⁴⁹

In June of 1977, Human Resources Research Organization, conducted a study for the Assistant Secretary of Defense (Health Affairs) to determine the percent of MHSS eligible beneficiaries who do not use the MHSS; why they do not use the MHSS; the percent of MHSS eligible beneficiaries who have health insurance comparable to the MHSS; how and why they acquire this insurance coverage; the relationship between non-use and health insurance coverage; and dental care utilization rates and costs to beneficiaries. The results of this study are summarized below:

- Approximately 1/2 of the survey respondents used only direct MHSS services
- CHAMPUS use constituted only 11% of total care
- Civilian only and civilian plus direct care through the MHSS accounted for more than 26% of total users
- In general, the further a beneficiary group lives away from direct contact with an MHSS facility, the greater is the likelihood for using only civilian health care.
- CHAMPUS usage among groups is remarkably similar with usage ranging from 9.8% for retired military to 15.1% for survivors.
- 25.5% of all respondents had at least one non-MHSS health insurance plan
- Retired and survivor families held the highest proportion of outside plans; active duty the lowest
- The most prevalent reason for obtaining outside insurance was that it was

"free or automatic" (45.5%) probably as a consequence of non-active duty employment or fraternal organization affiliation

- Most respondents were generally satisfied with the level of medical services received through the MHSS

- Lack of doctor acceptance and "red tape" were cited as the most serious detriments to CHAMPUS use, and finally

- Dental care utilization is directly related to income⁵⁰

The General Accounting Office has reviewed many facets of military health care. Recommendations resulting from some of these studies are listed below:

- That federal agencies could save money by sharing medical resources⁵¹

- Savings could be made by requiring beneficiaries to use uniformed services hospitals instead of CHAMPUS⁵²

- That the role and structure of the military's direct medical care system in peacetime needs to be defined⁵³

- That health care costs can be reduced if GAO recommendations are carried out⁵⁴

- That if retirees and dependents are to be provided care, facilities and other resources should be adequately provided⁵⁵

- That the performance of CHAMPUS fiscal intermediaries tends to perpetuate "red tape", is costly, and needs improvement⁵⁶

- That the military is not medically prepared to perform its wartime mission⁵⁷

- That uniform accounting and workload measurement is needed in the MHSS⁵⁸

Admiral David M. Cooney, in his report to the Secretary of the Navy in 1981 concerning CHAMPUS problems and benefits, revealed some startling misconceptions concerning the CHAMPUS program. He determined that poor communication at the program as well as the activity levels caused such misconceptions. He made numerous recommendations for program improvement which in turn would lead to increased CHAMPUS utilization. In surveying military personnel concerning their ranking of 13 military benefits, it was found that in-house medical care-self ranked first and in-house medical care-dependents

ranked third. CHAMPUS, on the other hand, ranked ninth, falling behind such benefits as retirement, education programs, leave, VA benefits, Servicemens Group Life Insurance, and Dependency and Indemnity Compensation.⁵⁹

The Military Health Services Utilization Survey of 1978 revealed even more information regarding utilization patterns of MHSS beneficiaries. Data was obtained in the following areas:

- Demographic and socioeconomic characteristics of the MHSS beneficiary population
- Workload data regarding utilization of health services
- Health insurance coverage purchased by and for the MHSS beneficiaries
- Satisfaction with military and civilian health care services
- Expenditures for health services including out-of-pocket expense, insurance premiums, etc.
- Health status of military beneficiaries
- Etc.

Results presented, however, dealt primarily with health insurance usage (similar to the Human Resources Research Organization study mentioned earlier). Tabular results from this study, showing insurance usage by numerous beneficiary variables are included in Appendix B.⁶⁰

Porter⁶¹, in his study of alternative forms to the military health care benefit, also used a multi-page survey instrument to determine MHSS beneficiary utilization patterns and desires for other forms of health care. He found that 19 variables were significant in predicting health care utilization by MHSS beneficiaries. These variables were:

Ethnic Background	Waiting Room Time
Religion	Catchment Area
Education	Income
Branch of Service	Insurance
Age	Unreimbursed Costs
Marital Status	Source of Care
Family Size	Health Status

Satisfaction
Appointment Delay
Dependent Hospitalization

Facility Visits
Respondent Hospitalization

Summary. Many factors influence the demand for health care services. As shown above, different hypotheses are presented with varying degrees of agreement present. (Although some of the studies are somewhat dated, the conditions and characteristics which prompted these studies remain present in today's health care environment and relate to the present study.) The impact of copayments on the demand for health care in the MHSS, based on the literature review is, therefore, inconclusive.

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Problem Analysis

In determining the implications of imposing "nuisance" or "clinic" fees on military beneficiaries, several specific areas will be examined. These areas include:

- Changes in demand resulting from fee or copayment requirements
- Cost benefit analysis of fee collection procedures
- Degree to which fee collections will satisfy CHAMPUS funding shortfalls
- Impact of copayments on the operations of military treatment facilities

Changes in demand will be predicted based on inferences made from an extensive literature review and from responses to a survey questionnaire. This questionnaire was developed to solicit patient predictions on utilization changes resulting from copayment requirements. It should be noted, however, that such prospective speculation is limited in nature and that actual changes in demand could only be accomplished in a retrospective mode.

Cost benefit analysis will target on the cost of collection procedures versus the revenue generated. The resulting net revenue will be used to predict the benefit to the CHAMPUS program funding shortfalls.

Changes in the operation of the medical treatment facilities (MTFs) will be reviewed in terms of resources required (personnel, equipment, facilities, etc.) for copayment collection. Patient flow and waiting and the resulting effects on the delivery of health care will also be examined.

Objectives.

Should a capitation or copayment fee be imposed on military health care beneficiaries, many problems may arise. The objectives of this research are, therefore, to identify and evaluate potential problem areas, resulting in planning tools which can later be used by any MTF once fee collections are initiated.

Specific objectives will be:

1. To predict changes in demand for health services resulting from fee implementation
2. To project net revenues resulting from collection procedures. Such projections will be presented in tabular form using present value techniques and will evaluate the impact of inflation on revenues generated.
3. To evaluate from objective 2 above, the cost effectiveness of fee implementation and the degree to which this implementation will supplement CHAMPUS funding.
4. To describe and discuss possible alternatives to the proposed fee collection procedures
5. To develop a plan of implementation for fee collection procedures

Criteria.

Criteria against which the proposed copayment program and any alternatives will be measured include the following:

- Minimize economic barriers to health care utilization to individual patients
- Minimize the cost to the government for providing health care to eligible beneficiaries.
- Minimize the impact of change on the operations of the MTFs.
- Maximize the health status of the service population by encouraging the use of preventive rather than curative health care.

Assumptions.

The primary assumption made in this research is that military medicine and civilian health care will remain essentially unchanged. Should the military become mobilized or some form of National Health Insurance be adopted, for example, this study would be invalidated.

A second assumption made is that there will be no change in the status of eligible beneficiaries. Any such change, of and by itself, would have a dramatic effect on the utilization of military health care.

A third assumption made is that, should outpatient billing or some other

program be initiated, resources necessary for implementation would be provided.

The effects of implementation without additional resources would be difficult if not impossible to predict in that shifting of resources (a collection agent hired in lieu of a registered nurse, for example) would result. Such resource shifting would in turn modify the type and degree of health care services available.

A final assumption made is that data available and patients treated at this command (Naval Hospital, Bethesda, Md.) are representative of other military medical treatment facilities.

Limitations.

The research will not analyze such subjective issues as retention and morale. These issues will be discussed in the area of program impact but indepth evaluation in the areas of motivation and job satisfaction are considered beyond the scope of this research.

Since outpatient billing does not currently exist, all projections made will be speculative in nature. As such, any predicted results must be viewed objectively and verified concurrently or respectively once (if) collections are initiated.

Beneficiary surveys will be conducted at this hospital only. Accordingly, the majority of respondents will be Navy affiliated. If branch of military service is a factor of health care utilization, results from this study may be negated. Also, the preponderance of higher annual incomes in the local geographic area may adversely effect the analysis of financial impact of copayments on the employed, retired beneficiary population in this area as compared with other areas.

Although the sample surveyed is of sufficient size to essentially eliminate individual bias, true representation would only be obtained from a sample drawn

from the entire military health care beneficiary population.

Research Methodology

Research will center on the following basic areas:

1. Consumer reactions to copayment implementation to include changes in the demand for health care
2. Cost of program implementation
3. Anticipated net revenues generated
4. Analysis of various alternatives
5. Effects of copayment (or alternatives) implementation on military medical operations

Consumer reactions will be solicited through personal interviews and survey questionnaires. General areas of discussion will include consumer attitudes toward the implementation of copayments, resulting monetary hardship, consumer (patient) recourse, if any, anticipated changes in the amount of health care services demanded by the consumer, and other comments as volunteered.

The survey sample size will be 150 outpatients reporting to the Outpatient Administration Department of the Naval Hospital, Bethesda. This sample is considered representative of the outpatient population of this hospital and of sufficient size to allow for adequate chi-square statistical analysis.

The survey questionnaire (see appendix C) was designed to solicit specific data. Questions 1 through 6 solicited various items of demographic data. Questions 7 through 9 asked for projections of demand change due to the \$5.00 copayment. Medical services in question 9 fall into three separate areas. Several (Pharmacy, Lab, X-ray, Physical Therapy, Follow-up care, and Referral to a specialist) all pertain to provider generated demand. Two refer to general medical need as determined by the patient (OB/GYN and Pediatric Clinic). Two refer to preventive care (Immunizations and Physical exams). One additional area was mentioned which could be interpreted as either acute care (depending on individual perception of symptoms) or "nuisance" care (as in the

case of the "worried-well"). Questions regarding the use of emergency medical services were not solicited since demand for these services is generally considered price inelastic.

Questions 10 through 14 asked for information on other health insurance the beneficiary may possess and the financial cost of such coverage. Question 15 solicits patient preference for source of care with the only financial constraint listed as the \$5.00 copayment fee. CHAMPUS and other insurance imply financial cost but no details were offered in order to elicit a response without other financial deterrents.

Item 16 provided a point of contact for follow-up discussion and item 17 allowed for voluntary remarks by respondents.

The cost for program implementation will center on anticipated revenue needs (manpower, facility space, equipment, etc.) required. Costs will be based, in part, on time and motion studies conducted on collection agents presently used to collect inpatient charges. It will also include present value cost estimates for equipment and supplies needed as well as construction/alteration charges for secure collection locations.

Revenue generated will be forecasted based on workload data (as modified by demand changes if necessary) from this hospital, the Navy overall, and the Army and Air Force. An issue that will be discussed is that concerning the definition of a chargeable visit. The impact of inflation in the health care industry will be applied to revenue projections in order to evaluate "real" net revenue over time. A tabular display will show gross revenues, operating costs, adjustments due to inflation, and the net revenue that would be available to supplement CHAMPUS.

Alternatives, such as civilian health insurance, will be analyzed and compared with the copayment proposal in order to determine the most cost effective and that which most fully satisfies established criteria.

Alternatives will not, however, be evaluated in the detail that copayments will be due to the limited scope of this study.

Finally, the effects of program implementation (whether copayment or some other alternative which is considered optimal and feasible) on military medical operations will be examined. Will patients, for example, wait longer before seeking care, resulting in more serious medical conditions? Will the health status of military beneficiaries deteriorate?

II. DISCUSSION

Military Health Care

What exactly is the Military Health Services System? Lando describes it as "an independent 'socialist' health system providing medical services to an estimated 10 million americans."¹ Rethmeier considers it "analogous to a highly organized, prepaid, group-medical practice thereby subject to similar patient behavior problems."² Porter describes it as "one of the largest employer-owned and operated health benefit systems in the United States."³

The primary objective of the MHSS is the maintenance of the military force in a physically and mentally combat ready status. Other objectives are:

- The assurance of the timely availability of trained manpower and other health resources required to support combat mobilization and contingency plans of the armed services.

- The provision of health care as part of the military pay benefit.

- The maintenance of these functions as effectively and efficiently as possible within the constraints of assigned mission and responsibilities.⁴

To achieve these objectives the uniformed services operate 168 hospitals and over 300 free standing clinics that have more than 19,000 operating beds. During fiscal year 1978 there were 911,000 admissions and 46,450,000 outpatient visits provided to beneficiaries at a total cost of \$3.9 billion. There are 107,000 personnel assigned to the system of whom about 11,000 are physicians.⁵

Direct comparison with similar figures from the civilian sector is difficult because the MHSS is designed to provide all the health care necessary to support the various communities it serves. Besides inpatient and outpatient care, a base or post hospital provides:

- Dental care to some community members
- Occupational health services to all employees of the installation
- Infectious disease and vector control programs
- Water purity and affluent testing for the installation itself
- Inspection for wholesomeness of food sold on the military installation
- Inspection of all food preparation on the installation
- Etc.

In a military setting, the hospital or MTF is responsible for functions usually performed by the Federal Aviation Administration (FAA), U. S. Department of Agriculture (USDA), Public Health Service (PHS), State and county health departments, Office of Safety and Health Administration (OSHA), private practitioners, dentists, community hospitals, etc.

Beneficiaries of the MHSS include several categories of consumers. The most common are:

- Active duty personnel (includes Army, Navy, Marine Corps, Air Force, Public Health Service, Coast Guard, and others)
- Dependents of active duty personnel
- Retired service members (retired for length of service or disability))
- Dependents of retired personnel
- Dependents of personnel who died while on active duty
- Dependents of deceased retired personnel

(The last two categories are commonly referred to as "survivors".)

The MHSS serves approximately 9.5 million beneficiaries. There are 2.1 million active duty personnel, 1.4 million in the United States, 500,000 overseas and 200,000 afloat.⁶ These active duty personnel have 2.6 million dependents of whom 400,000 are overseas.⁷ Approximately 1.3 million men and women draw wither disability or non-disability pensions and are eligible for care on the MHSS.⁸ An additional 3.1 million people are dependents of

retirees and are likewise eligible for care.⁹ And the 350,000 who are survivors of active duty and retired personnel are also beneficiaries.¹⁰ In addition, occupational health and emergency services are provided to an employer with 1.1 million civilian employees.¹¹

Different beneficiary classes have different entitlements to services within the MHSS. Active duty personnel are entitled to complete medical and dental care. All other classes of beneficiaries may receive medical care in military facilities only when space and staff are available. If space or a particular service is not available in military MTFs, other classes of beneficiaries must seek care from civilian sources or other military MTFs. Care from civilian sources for these personnel comes under the CHAMPUS program.

Dental care is more restrictive. Active duty personnel are entitled to full care. Retirees may receive care if space is available. Dependents (all classes) may receive only emergency care. Routine care for dependents is not authorized unless they are overseas or are in one of the approximately 100 areas in the United States which have been designated as "remote areas," because adequate dental care is not available in the civilian sector. CHAMPUS will not pay for dental care unless it is adjunct to a medical condition.

CHAMPUS is a United States government financial mechanism which partially reimburses beneficiaries or the providers for health care services received from civilian sources. It was designed to supplement care available in uniformed service facilities. CHAMPUS provides coverage of inpatient and outpatient care, rehabilitative services for the physically and mentally handicapped dependents of active duty personnel, and various degrees of therapy and equipment reimbursement within established guidelines. Dental care under CHAMPUS, like that available in military MTFs, is limited to that required as a necessary adjunct to medical and surgical treatment. At age 65 any

beneficiary, except for active duty dependents, who is entitled to hospital benefits under Title XVIII of the Social Security Act (Medicare), loses his CHAMPUS eligibility.

The program's cost-sharing features as of 1 October 1982 are summarized in Table 1:

TABLE 1
CHAMPUS COST-SHARING PROVISIONS

<u>INPATIENT</u>	<u>OUTPATIENTS</u>
<u>Active Duty Dependents</u>	
Beneficiaries pay \$6.55 per day or \$25.00 per admission, whichever is greater.	The family pays the first \$50.00 per person each year, up to \$100.00 per family, plus 20% of additional charges.
<u>Retirees, Their Dependents, Survivors</u>	
Beneficiaries pay 25% of all charges.	The family pays the first \$50.00 per person each year, up to \$100.00 per family, plus 25% of additional charges.

(See Appendix D for a summary of CHAMPUS claims for fiscal year 81.)

That health care is part of the military compensation package has long been accepted. Former ASD(HA), John H. Moxley III has stated that DOD is committed to "attain a cost-effective MHSS which satisfies military medical support requirements, and provides quality care to all beneficiaries as a part of a benefit package which is an explicit, integral component of military compensation policy."¹²

The ramifications of that acceptance have not been explicitly defined or widely recognized. A comment from the Defense Resource Management Study best summarizes the confusion facing the health benefits issue today:

"Health care tends to be viewed by the managers of the system not as a guaranteed benefit at some specified level but as a serendipitous by-product of a health care establishment that exists to maintain the health of the Active Duty force and to

provide wartime support. Military beneficiaries, on the other hand, have come to expect a guaranteed benefit. The divergency of these two philosophies appears to explain much of the frustrated expectations and dissatisfaction."¹³

Military beneficiaries, therefore, perceive health care as a right; a benefit of their service and part of their compensation package. Yet, like their socialized medicine counterparts in Europe, especially Britain, Denmark and Sweden¹⁴, the providers of the MHSS are all experiencing rapidly escalating costs and if, as Lando asserts, military health care is more costly than civilian health care¹⁵, changes in structure and function are indicated.

Copayments, as a method for reducing overuse of the MHSS, may produce some benefit. In his study, Rethmeier found that 37% of a sample patient population surveyed agreed that too many patients overuse military medical care. These respondents, however, "did not regard financial charges as an effective means of controlling the system."¹⁶

The conflict reflected above led this author to conduct two analyses. One is the predicted effects of copayment on the demand for health services as derived from inferences made during the literature review. The second is the patient predicted demand change reflected in a survey conducted at the Naval Hospital, Bethesda.

1 Mordechai Lando, "A Comparison of the Military and Civilian Health Systems," Inquiry, 8 (1971), 56-61.

2 Rethmeier, op cit.

3 Stephen W. Porter, Evaluating the Impact of Alternative Forms of the Military Health Care Benefit, An unpublished thesis printed by the Defense Technical Information Center, Defense Logistics Agency, Alexandria, Va., June 1980.

4 Summarized from Report of the Military Health Care Study. Department of Defense, Department of Health, Education, and Welfare, and Office of Management and Budget, December 1975, pp. 14-16.

5 Vernon McKenzie, Principal Deputy Assistant Secretary of Defense (HA).
Testimony before subcommittee on Military Compensation of the Committee on
Armed Services, U. S. House of Representatives, 23 May 1979.

6 Derived from the "Almanac Issue" of Defense 82, September 1982.

7 Ibid.

8 Ibid.

9 Selected Manpower Statistics. Washington, D. C., Department
of Defense, Washington Headquarters Service, March 1979.

10 Ibid.

11 Defense 82, op cit.

12 John H. Moxley, III, "Early Perceptions of Military Medicine,"
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13 Donald B. Rice, Defense Resource Management Study, Final Report,
Washington, D. C., Office of the Secretary of Defense, February 1979.

14 Anne Somers, "The Rationalization of Health Services: A Universal
Priority," Inquiry, 8, 1971, 48-59.

15 Lando, op cit.

16 Rethmeier, op cit.

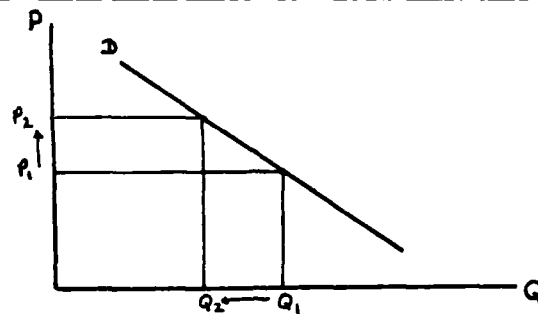
Pre-Survey Demand Change Expectations.

As a result of the previously cited literature review, several outcomes, resulting from the implementation of copayments, may be expected.

- Cost may have no effect on the demand for health services.¹
- Copayments do not serve to deter utilization unless the amount of copayment is so high as to wisely discourage use.²
- A decline in demand (as much as 24-25%) can be expected after copayments are begun.³
- Physician generated service (referrals, ancillary tests, etc.) can be expected to remain constant even if demand for other services decline.⁴
- After copayments are begun, the poor will decrease their demand more than the overall population.⁵
- A decline in the demand for ambulatory care may later be offset by an increase in inpatient care utilization.⁶
- Copayments may inhibit the demand for all care, even that which is medically indicated.⁷
- Copayments may result in a decline in the demand for preventive services.⁸

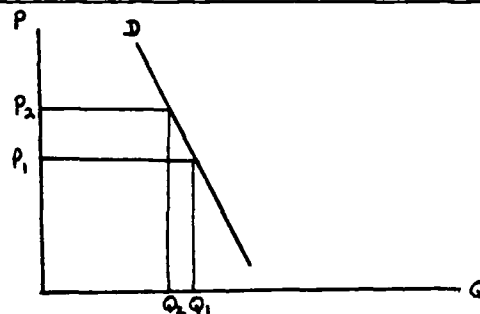
General economic demand theory postulates that a rise in price will cause a shift along the demand curve, reflecting a reduction in the quantity demanded. As shown in Figure 1, a rise in price from P1 to P2 (in the present study from \$0 to \$5) would result in a demand reduction reflected in the shift from Q1 to Q2. (NOTE: Military medicine as it presently exists is not cost free. Time is a distinct cost which causes the demand line to take on an other than horizontal slope.)

FIGURE 1.
DEMAND CHANGE DUE TO A PRICE INCREASE - PRICE ELASTIC



This shift is based on the assumption that the demand for medical care is as responsive to price changes as other consumer products (price elastic). If medical care was determined to be a required rather than desired commodity, the demand curve would be nearly vertical, and changes in price, shown below in Figure 2 as the change from P_1 to P_2 , would have little effect on the quantity, Q_1 to Q_2 , demanded (price inelastic).

FIGURE 2.
DEMAND CHANGE DUE TO A PRICE INCREASE - PRICE INELASTIC



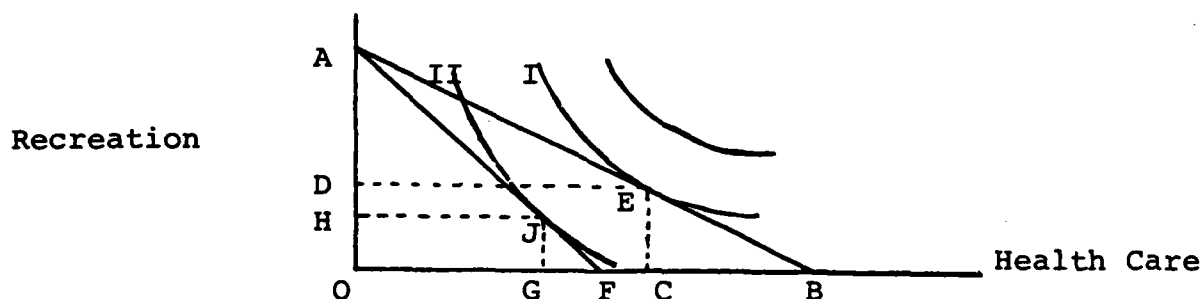
The use of indifference curves to predict the effects of price changes on the demand for medical care causes some dissention. Newhouse, for example, advocates the use of indifference curves to predict the substitution effect of some other commodity for medical care in the event of price changes.⁹

Ward, on the other hand, feels that it is inappropriate to use indifference curves since the importance of medical care differs between families.¹⁰

Assuming, however, that medical care carries the same importance for all consumers, an indifference curve would show the effects of a price change on the

demand for medical care as compared with some other commodity demanded.

FIGURE 3
INDIFFERENCE ANALYSIS OF HEALTH CARE AND RECREATION



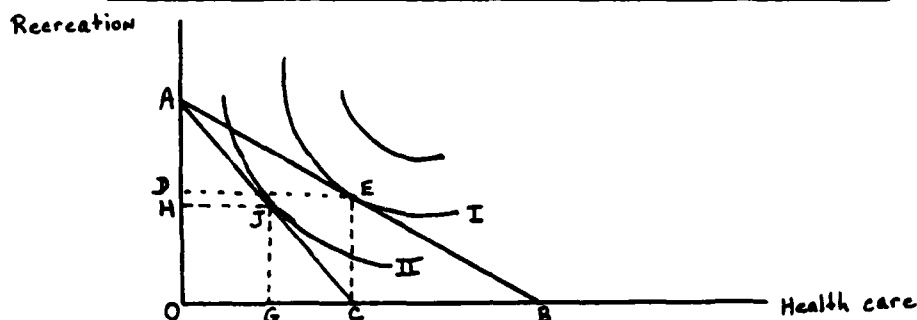
In Figure 3, the quantity of health care and quantity of recreation, for example, are compared. The budget constraint, line AB, shows the quantity of health care and the quantity of recreation that can be purchased at present, without copayments. (As discussed elsewhere, military health care carries some cost, especially in time, without copayments.) Patients can obtain OA units of recreation or OB units of health care, or some other combination of the two along the budget line. For maximum utility, the patient would consume OC units of health care and OD units of recreation (derived from the quantity of each present at point E, where indifference curve I intersects the budget line).

Under copayments, however, a new budget line, AF, becomes the constraint. Under this constraint, OG units of health care and OH units of recreation would provide maximum utility on the lower indifference curve II. Thus, a rise in the cost of health care would result in a decrease of utilization of not only health care, but also some other commodity such as recreation.

In summary, a rise in the cost of medical care through the initiation of a copayment feature could possibly cause a decline in demand for medical care. (The literature review did not offer consistent results so a generalized statement of expectation would be inappropriate.) Such a decline could, in turn, result in poorer health status due to prevailing ill health or a degeneration of minor medical problems into major medical catastrophes. A change in demand

demand for medical care as compared with some other commodity demanded.

FIGURE 3
INDIFFERENCE ANALYSIS OF HEALTH CARE AND RECREATION



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due solely to price changes reflects a subjective perception of health care as a consumer good. If perceived as a biological subsistence item rather than a consumer good, however, price will have little or no effect on demand. The results from the survey conducted, based on patient predicted utilization patterns, will be used to determine if a change in demand would indeed result from the copayment feature.

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- 1 Leveson, op cit.
 - 2 Hardwick, op cit.
 - 3 Scitovsky and Snyder, op cit.
 - 4 Wolfson, op cit. Also, Scitovsky and Snyder "...Four Years Later,"
op cit.
 - 5 Beck, op cit.
 - 6 Roemer, op cit.
 - 7 Ibid.
 - 8 Paul Feldstein, Health Care Economics (New York: John Wiley & Sons,
1979).
 - 9 Newhouse, op cit.
 - 10 Ward, op cit.

Survey Results.

A total of 150 outpatients, selected at random as they arrived at the Outpatient Administration Department of the Naval Hospital, Bethesda, made up the sample population.¹ Twenty-nine additional respondents were excluded from the study. These 29 included 26 active duty members that did not have dependents and 3 people of foreign origin. The copayment proposal did not apply to these groups and they were, therefore, excluded from the sample.

A comparison was made to determine if the sample was representative of beneficiary groups in their percentage of utilization. The analysis compared beneficiary group percentages from outpatient workload reports with those in the sample. Allowing for the respondents excluded, the sample appears representative of the outpatient population reporting to this hospital. Results are shown in Table 2.

TABLE 2

COMPARISON OF BENEFICIARY GROUP UTILIZATION

<u>Beneficiary Group</u>	<u>Historical Representation</u>	<u>Group Representation</u>
Active Duty	27.5%	11.3%
Active Duty Dependent	36.2%	47.3%
Retired Military	19.0%	24.0%
Dependent of Retired/Deceased	17.3%	17.4%

Other demographic characteristics of the sample population are presented in tables 3 through 10.

TABLE 3

SAMPLE DISTRIBUTION BY STATUS

Active Duty & Dependents	58.6%
Retired & Dependents	38.7%
Survivors	2.6%

TABLE 4

SAMPLE DISTRIBUTION BY SERVICE AFFILIATION

Navy	70.0%
Marine Corps	7.4%
Army	6.2%
Air Force	7.0%
Coast Guard/ Public Health Service	6.0%
Other	4.0%

TABLE 5

SAMPLE DISTRIBUTION BY RANK - RETIRED/DECEASED

O4-O6	25.8%
O1-O3	4.8%
W1-W4	6.5%
E7-E9	35.5%
E4-E6	27.4%

TABLE 6

SAMPLE DISTRIBUTION BY RANK - ACTIVE DUTY

O4-O6	3.4%
O1-O3	9.0%
W1-W4	1.1%
E7-E9	12.5%
E4-E6	43.2%
E1-E3	30.7%

TABLE 7

SAMPLE DISTRIBUTION BY AGE GROUP

Less than 10	24.0%
10-18	14.8%
18-23	5.8%
23-64	52.6%
65 & older	2.9%

TABLE 8

SAMPLE DISTRIBUTION BY FAMILY INCOME

Less than \$10,000	.3%
\$10-20,000	38.0%
\$20-30,000	28.3%
\$30-40,000	21.0%
\$40-50,000	9.7%
More than \$50,000	2.7%

TABLE 9

AVERAGE NUMBER OF OUTPATIENT VISITS PER FAMILY (LESS ACTIVE DUTY)

Active duty families	14.9
Retired families	9.2
Survivor families	7.4

TABLE 10

SAMPLE DISTRIBUTION BY FAMILY SIZE

1 Family Member	.1%
2	28.6%
3	26.7%
4	25.3%
5	12.7%
More than 5	6.0%

TABLE 11

SAMPLE DISTRIBUTION BY OTHER MEDICAL INSURANCE

None	74%
Medicare	8%
Commercial	14%
Do not know	4%

TABLE 12

OTHER MEDICAL INSURANCE BY BENEFICIARY CLASS

	NONE	MEDICARE	COMMERCIAL	DO NOT KNOW
Active Duty	78	1	8	1
Retired	31	10	12	5
Survivor	2	1	1	0
TOTAL (N=150)	111	12	21	6

TABLE 13

OTHER MEDICAL INSURANCE BY INCOME

	NONE	MEDICARE	COMMERCIAL	DO NOT KNOW
< \$10,000	0	1	0	0
10-20,000	51	4	1	1
20-30,000	33	4	3	2
30-40,000	25	1	6	3
40-50,000	3	2	9	0
> \$50,000	2	0	2	0
TOTAL (N=150)	111	12	21	6

Analytical Techniques. Responses to questions 7 and 8, which permitted respondents to predict a decrease in utilization, were analyzed manually using the chi-square test of association. The chi-square statistic is a test of statistical significance. It is designed to provide a basis for inference as to whether or not there exists a relationship between two variables. Given the row and column totals presented, expected frequencies in each cell are derived under the assumption that no relationship exists. The expected totals and observed totals are then contrasted against each other. Little or no difference in the comparison leads to the inference that there is no relationship between those variables. Some slight differences will occur simply due to chance, but a large chi-square value would infer that there might be a relationship between the variables. The probability of obtaining a chi-square

value as large or larger than the one calculated from the sample (given the assumption of no relationship) is the result desired. Chi-square does not measure the degree of association between two variables, only whether or not an association exists.

Chi-square analysis was accomplished by comparing the visit decrease indicated in question 8 with two respondent characteristics: beneficiary class and income. In neither case was an association present even at a low, 90%, level of significance. (Chi-square contingency tables for these two studies are shown in Appendix E.)

Next, a statistical review of the average number of visits before (question 7) and after (question 8) copayments was conducted to determine if there was any statistical difference between the two.

Using a paired comparison test, the following was computed.

\bar{d} : sum of the differences between the two average number of visits, divided by the sample size.
 $\bar{d} = \sum d_i / n = -.1933$

s_d^2 : variance of the differences
 $s_d^2 = n \sum d_i^2 - (\sum d_i)^2 / n(n-1) = 2.408$

Using the test statistic $Z = \bar{d} - \mu_d / s_d / \sqrt{n}$, where $s_d = \sqrt{s_d^2}$, and assuming an α of 5%, the critical value of Z is ± 1.95 .

Hypothesis - the null hypothesis that $\mu_2 = \mu_1$, or $\mu_2 - \mu_1 = 0$. If we let $\mu_d = \mu_1 - \mu_2$, we can state the null and alternate hypotheses as:

$H_0: \mu_d = 0$
 $H_a: \mu_d \neq 0$

Therefore, a computed Z greater than 1.95 or less than -1.95 would indicate a difference between the two averages, inferring a significant decrease (or increase) in visits. The computed value of Z, as derived from the formula above, is 1.526. H_0 cannot, therefore, be rejected and we can conclude that the two averages are equal.

Based on a comparison of the responses to questions 7 and 8, it can be concluded that a \$5.00 copayment fee will not affect the demand for health

services.

Responses to question 9 were a bit more inconclusive. Of the sample population, 138 did not indicate any curtailment of the services listed. The remaining 12 accounted for the following 14 responses (two respondents marked two areas):

Physician determined services	0
Primary care	2
Preventive care	4
Minor complaints	8
<u>TOTAL</u>	<u>14</u>

Interestingly noted was the fact that of the 19 reporting a decrease in utilization between questions 7 and 8, only 10 marked one of the areas in question 9. The nine that failed to mark an area in question 9 stated that they would need to evaluate each situation on an individual basis. Because of this data inconsistency and because responses were highly subjective, further analysis on this question was stopped.

Results from question 10 are shown in Tables 11 to 13. Because of respondent confusion as to the format or sponsorship of other insurance, four areas (school programs, HMOs, commercial insurance, and other) were combined into a single category called "commercial insurance". An additional category, "Do Not Know", was added to reflect those responses accordingly.

Questions 11 through 14 were discarded due to lack of response resulting from an inability for most respondents to define or determine the use, source, or costs of other insurance programs. Such lack of knowledge concerning insurance benefits appears to support the findings of Moustafa cited previously.

Question 15 asked respondents to indicate their preference between three types of medical care. Tables 14 and 15 reflect responses to this question.

TABLE 14

PREFERENCE FOR SOURCE OF CARE - TOTAL

Military at \$5.00	91.3%
CHAMPUS	2.0%
Other Insurance	4.0%
No Response	2.6%

TABLE 15

PREFERENCE FOR SOURCE OF CARE - BY BENEFICIARY CLASS

	Active Duty	Retired	Survivor	Total
Military at \$5.00	82	53	2	137
CHAMPUS	0	2	1	3
Other Insurance	3	2	1	6
No Response	3	1	0	4

Summary. The results from the survey conducted lead one to believe that there will be no significant decrease in demand as a result of the \$5.00 copayment fee proposal. A patient's prediction of utilization before copayment initiation, however, is fraught with subjectivity. There is no personal cost for predicting a decrease, especially when one does not exist. Actual patient behavior, when faced with out-of-pocket expenses may be quite different.

¹ The original sample size was planned to be 300 outpatients. Distribution of questionnaires on a random basis by Outpatient Administration Department personnel, however, was felt by command personnel to be inappropriate. It was felt that patients might misinterpret the intent of the survey, perceiving it as an official questionnaire rather than part of a research study regardless of notations to the contrary. The author, therefore, conducted the survey on a personal interview basis, completing the questionnaire and providing additional information or clarification to each respondent.

Consumer Perceptions and Acceptance of Copayment Fees

Since all surveys were accomplished in an interview mode, respondent attitudes, both verbal and nonverbal, were obtained in every case.

Without exception, survey respondents were opposed to copayment fees. Yet, none felt they had any recourse should such fees be mandated. Letters to Congressmen and fraternal associations were mentioned, but those who responded in this manner were not very optimistic of results.

The below listed comments characterized the general feelings of the sample population:

- "I earned this medical care by serving 28 years in the Navy and no one is going to make me pay for it."

- "Its not the money, its the principle of the thing."

- "They're always @*!;/< (expletive deleted) with our benefits!"

- "I guess \$5.00 isn't too much. If it goes higher I might have to think about it."

- "Why subsidize CHAMPUS? That program's not worth a damn anyway. Why don't they build more (military) hospitals?"

- "I'd rather pay \$5.00 here than \$40.00 somewhere out in town."

Some respondents, misunderstanding the intent to subsidize CHAMPUS funding, felt that the funds generated could be used to increase services and decrease waiting time. They were disappointed when told the hospital would not share in the funds.

Many respondents simply did not understand the CHAMPUS program. Those that did felt that their deductibles and copayments under CHAMPUS should be sufficient subsidy. Many respondents disagreed with subsidizing CHAMPUS because they did not have an occasion to use CHAMPUS and felt that they were being "used to pay for someone else's program/benefit."

In discussing the copayment proposal, a common complaint with the MHSS arose. Waiting time (for appointments, physicians, medications, lab tests, etc.) was the primary complaint about military health care. Some stated that they refused to seek care or delayed in seeking care because of the long waiting involved. When questioned further, most respondents indicated a willingness to pay \$5.00 (or even more) if such waiting could be reduced.

In summary, respondents were opposed to the concept of copayment fees. Most indicated, however, little inclination to seeking care elsewhere. The largest deterrent to seeking medical care (even with the copayment fee) is waiting time. Such waiting benefits those who are "time-rich" but "dollar-poor". Of all beneficiaries, retirees, their dependents, and survivors are more "time-rich" on the whole than the active duty and active duty dependent populations. Copayments may serve to offset this wealth of time thus reducing queues and increasing overall patient satisfaction.

Visits Chargeable.

At some time before initiation of copayment charges, a determination must be made as to exactly what constitutes a chargeable visit.

Presently, the Navy definition of a visit for outpatient workload reporting is as follows:

- Each time a patient goes to a separate organized clinic or specialty service for examination, diagnosis, treatment, evaluation, consultation, counseling, advice, or is treated/observed in quarters, and a signed and dated entry is made in the patients health record
- Each time a patient is seen, even though the patient may be referred elsewhere for admission
- Each time a patient is seen who has been transferred to a clinic or specialty service by another facility
- Each time a patient is seen in the Emergency Room, primary medical care area, or other designated area outside regularly established clinic hours
- Each time all or part of a complete physical exam is performed. One complete physical exam requiring the patient to be examined or evaluated in four different clinics is reported as four visits.
- Each time a limited or screening exam is performed
- Each time certain minor tasks (PAP smears, blood pressure evaluations, weight checks, prescription renewal, etc.) are performed when not part of other routine care.
- Other minor functions as described in detail¹

Ancillary services, such as laboratory, radiology, pharmacy, and others, are not considered primary care and are not, consequently, counted as visits.

Also reported but identified separately are the visits of inpatients to outpatient treatment areas. These visits are reported if the treatment or service is not related to the reason for admission. For example, an orthopedic inpatient visiting the optometry clinic would be counted as one inpatient-ambulatory visit.

It should be noted that the classification of visit is not dependent upon the professional level of the person providing service. In addition to

physicians, nurses, corpsmen, physician assistants, medical technicians, medical specialists, and students under supervision can also provide care recognized as an countable visit.

In 1978, the General Accounting Office, on reviewing the medical departments of the Army, Navy and Air Force, found it impossible to compare the costs and workloads of these three services due to different accounting and workload measurement systems.² As a result of this study, DOD implemented the Uniform Chart of Accounts (UCA) for Fixed Medical and Dental Treatment Facilities.³

Under the provisions of the UCA, visits are defined as indicated for the Navy. In fact, the Navy definition was modified to meet UCA criteria. The UCA accounts for inpatient-ambulatory visits separately, as in the Navy system. Under UCA, which determines a unit cost for various forms of medical care, inpatient-ambulatory visit costs are transferred to the appropriate inpatient workload account and considered part of the inpatient cost.

The UCA does not, however, apply to DOD component facilities such as medical facilities for field service (aid stations, clearing stations, and division, field, and force combat support and evacuation hospitals); medical facilities afloat (hospital ships and sick bays aboard ships); tactical casualty staging facilities, medical advance base staging facilities, and medical advance base components contained within mobile type units. These component facilities, with little exception, treat only the active duty population. Since copayments will not apply to this beneficiary class, UCA criteria and concepts can be readily applied to copayment procedures.

Since copayment charges will, presumably, be applied to all three military services, it appears logical to assume that the UCA definitions will be applied. It also appears safe to assume that a single, per diem copayment rate will apply. Patients will, therefore, pay a single copayment fee per day, regardless of the number of 'visits' made during that day. Under a

per diem copayment concept, patients would pay their copayment fee upon arrival at the MTF, obtain a receipt of payment which they present to gain admittance to the health care providers, and receive required care. To apply copayments on a per visit rather than per diem basis would create administrative burdens and enormous patient dissatisfaction.

Based on these premises (UCA definition of 'visit' and per diem copayments), adjustments to workload data must be made.

The Navy, in fiscal year 1982, accounted for over 13 million outpatient visits. In order to obtain the net chargeable visits, allowances must be made for active duty personnel (who will not make copayments), and same-day multiple visit accounting.

Total visits	13,678,384
Less: Active Duty visits	6,608,095
Same-day Multiple visits	1,767,571 ⁶
Net chargeable visits	5,302,714

Chargeable visits, therefore, represent approximately 40% of the total visits reported. Using reported outpatient visits of the Navy, Army, and Air Force and applying the 40% factor (for convenient estimation) the total chargeable visits for the military would be as shown below in Table 16.

TABLE 16

TOTAL CHARGEABLE VISITS, ALL MILITARY

<u>SERVICE</u>	<u>TOTAL VISITS</u>	<u>FACTORED AT 40%</u>
NAVY	13,678,384	5,302,714
ARMY	20,608,495 ⁷	8,243,398
AIR FORCE	15,002,214 ⁸	6,000,886
TOTAL CHARGEABLE VISITS		19,546,998

Revenues and expenses associated with copayment collections on chargeable visits are discussed in the next section.

¹ Department of the Navy, Bureau of Medicine and Surgery, Medical

Services and Outpatient Morbidity Reporting System, BUMEDINST 6300.2A,
Washington, D. C. 11 December 1979.

2 Comptroller General of the United States Report to Congress, Uniform Accounting and Workload Measurement Systems Needed for Department of Defense Medical Facilities, General Accounting Office Report FGMSD-77, Washington, D. C., Government Printing Office, 17 January 1978.

3 Department of Defense, Department of Defense Uniform Chart of Accounts for Fixed Military Medical and Dental Treatment Facilities, DODINST 6010.10M, Washington, D. C., 25 July 1979.

4 Statistics of Navy Medicine, 38 (Fiscal Year and Fourth Quarter Totals, Fiscal Year 1982), NAVMED P-5028, Washington, D. C.

5 Ibid.

6 The rate for same-day multiple visits was estimated by the Head of the Outpatient Administration Department, Naval Hospital, Bethesda, Maryland, and is being used in this study more for convenience than accuracy. Actual rates will vary between MTFs, between services, and between different time periods.

7 Telephone interview between Mrs. Sharon Foss, Patient Administration System, Biostatistics Activity, Ft. Sam Houston, Texas, and the author of 4 April 1983.

8 Telephone interview between the Director, Health Care Support, Biometrics Division, Brooks AFB, Texas, and the author of 9 February 1983.

Cost of Copayment Collections

In September 1982, the author participated in a study to determine the local resource requirements for copayment collections (as required by higher authority).¹ The results of that study are summarized below.

Resources required:

Equipment (cash registers, safes, etc.)	\$ 78,650
Civilian Pay	528,650
Operating Costs (supplies, utilities, etc.)	20,000
Construction/Alteration Costs	72,000
TOTAL	<u>\$699,300</u>

Since the workload at this hospital is rather large, a per unit cost method will be used to estimate total resource needs for the military. Construction/alteration costs, necessary to provide a secure cash collection site, would be considered a one-time cost. Based on an annual anticipated workload at this hospital of 272,000 chargeable visits, the unit cost for construction/alteration would be \$.265 (for the first year only). For the entire military this would be \$5,180,750 based on the 19,550,000 total visits previously determined.

For equipment, an annual depreciation expense appears to be the best method for determining a unit cost. Using straight line depreciation and assuming an eight year useful life with no salvage value, the unit cost for this hospital would be .036.² For the entire military this annual cost would be \$703,800.

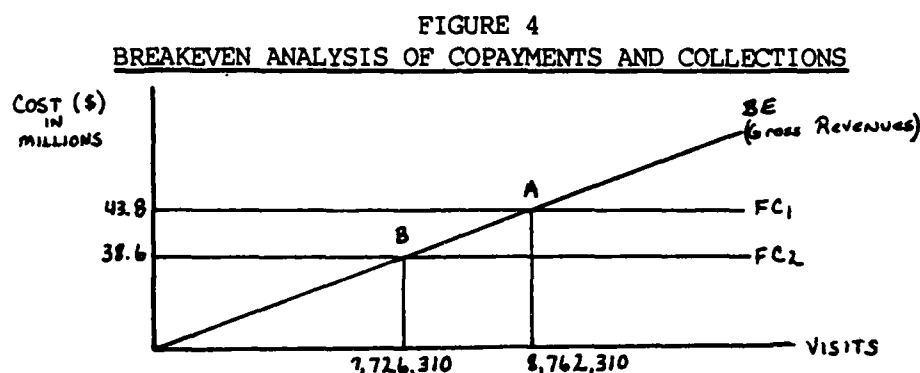
Civilian salaries and operating costs for this hospital would result in a unit cost of \$1.94, which, projected for the entire military, would result in \$37,927,000.

Total implementation costs for the military, therefore, would be \$43,811,550. (It is recognized that the estimates obtained above are limited in their applicability to the entire military. Such methods were used more for convenience in estimating costs than for detailed accuracy.)

Total net revenue for the first year of operations, therefore, would be \$53,938,450 computed as follows:

Total gross revenues (19,550,000 @ \$5.00 each)	\$97,750,000
Less:	
Construction/Alteration Costs	5,180,750
Depreciation expense	703,800
Operating costs (salaries & supplies, etc.)	37,927,000
TOTAL NET REVENUES, FIRST YEAR	\$53,938,450

The breakeven point, where revenues equal expenses, in the first year would be at 8,762,310 visits as shown below:



In Figure 4, line FC1 reflects the fixed costs for collections in the first year of operations. Line FC2 reflects the fixed costs in the second and subsequent years when construction/alteration costs are excluded. On the breakeven line (line BE), point A reflects the instant when collection revenues equal collection costs in the first year. Point B indicates the equilibrium point in the second and subsequent years. Thus, in year one, 8,762,310 chargeable visits would be needed to recover costs. In year two, this visit total would be only 7,726,160.

The next logical step in this analysis is to examine the revenue realized over time. Table 17 shows the net revenue generated over the next ten years. Several assumptions were made in this analysis. These assumptions were:

1. That the \$5.00 fee is static and will not later be raised
2. That the number of outpatient visits and, therefore, the gross revenues

will remain unchanged

3. That expenses will increase at an annual rate of 12%. (This is a gross assumption as it would not apply equally to all expenses and may not persist for the entire 10 year period, if at all.)

TABLE 17

PRESENT VALUE ANALYSIS OF REVENUES AND EXPENSES

YEAR	GROSS REVENUES	EXPENSES	NET REVENUE	PRESENT VALUE OF NET REVENUE (@12%)
1983	97,750,000	43,811,550*	53,938,450	53,938,450
1984	97,750,000	43,266,496	54,483,504	48,648,321
1985	97,750,000	48,458,476	49,291,524	39,295,203
1986	97,750,000	54,273,493	43,476,507	30,946,578
1987	97,750,000	60,786,312	36,963,688	23,490,424
1988	97,750,000	68,080,669	29,669,331	16,834,378
1989	97,750,000	76,250,349	21,499,651	10,891,723
1990	97,750,000	85,400,391	12,349,609	5,585,728
1991	97,750,000	95,648,438	2,101,562	848,821
1992	97,750,000	107,126,250	(937,625)	(33,811)

*Includes one-time construction/alteration costs.

The last column of Table 17 shows that the net present value realized in the years given. This analysis was done to determine the effect of copayment collections on present day CHAMPUS expenditures. As shown in the table, a loss of \$33,811 in 1983 dollars would result in 1992 under a constant copayment fee of \$5.00, resulting in no subsidy to CHAMPUS funding requirements of approximately \$1.2 billion. (The same analysis could have been conducted by escalating annual CHAMPUS funding to the 1992 level instead of discounting revenues.) It appears obvious that \$5.00 will not remain a fixed fee if the intent is to subsidize CHAMPUS funding.

If used only to deter excessive utilization of medical resources, the \$5.00 copayment fee will lessen its impact, if any, on overuse over time. If unchanged and again assuming a 12% annual inflation rate, this \$5.00 in 1992 will only be worth \$1.80 in today's dollars. This amount, in this author's opinion, would little serve to discourage any utilization.

Inpatient charges, directly related to annual subsistence costs, are

changed annually at the beginning of the fiscal year. An anticipated change in copayment fees, perhaps based on the annual rise in medical costs (Consumer Price Index, Medical), is not considered unreasonable.

1 An unpublished cost report prepared by LTJG G. E. Earley MSC USN, LCDR W. Brent MSC USN and LT R. A. Acklin MSC USN for the Commanding Officer, Naval Hospital, Bethesda, Md. dated 27 September 1982.

2 Using straight line depreciation, the following computations result:
 $\$78650/8 = \9830 depreciation expense/year. $\$9830/272,000$ chargeable visits = .036 per visit unit cost.

Impact of Copayments on Military Medical Operations

The effects of copayments on the operations of military treatment facilities are difficult to determine because of the predictive nature of such an evaluation. Several resulting behaviors, however, can be anticipated.

Long waiting periods have long been a major complaint of the MHSS. Copayment requirements would add yet another queue to the MHSS maze, thus increasing patient dissatisfaction.

In addition to increased waiting time, some patients will inevitably find fault with some aspect of the collection process. Insufficient change, lost or misfiled receipts, and administrative functions are examples of potential situations which can lead to additional patient distress.

Another issue that may arise is that of modified patient perception of health care in the MHSS. Presently beneficiaries view health care as a benefit of military association. When paying, however, these beneficiaries become paying consumers and, as such, may place different demands on the health care system. They may expect more in the way of service (staff), accommodations (facilities), or opportunities (health care services). Since revenues received are not expected to return to the MTFs, such expansion or modification of services is not expected; yet, the demand may be present.

Disagreements between the patient and the MTF could arise over the services billed. As previously mentioned, definitive guidelines as to what constitutes a chargeable visit must be provided. Even so, a chargeable visit that does not meet the patient's expectation, such as a follow-up visit that takes less than a minute and in which no new "hands-on" care is provided, will cause patient resentment. A similar situation often occurs for inpatient care. A patient that is admitted and discharged in the same day and eats no meals is often distressed and frequently outraged when charged the rate for one

inpatient day. Certain similar situations will undoubtedly occur in outpatient care.

The effects on the actual delivery of health care, however, should be minimal (See also comments on implementation in the Recommendations section). Some providers, sympathetic to the financial cost of health care and with no personal incentive involved, may provide more than initially requested care. Comments from patients such as, "While I'm here I was wondering if you could look at" are frequent now. Such queries may become more frequent if follow-up visits also result in copayment charges.

Although this study revealed no change of demand resulting from charging copayment fees, the result of declining demand, which may in fact be demonstrated after (if) copayments are initiated, must be discussed. Suppose, for example, that patients, because of copayments, do not immediately seek care. What will be the results?

If the condition which initiated the perceived need for health care is relatively minor with no long-term effects, such as minor headaches or sinus congestion, the deliberate act of not seeking treatment will have no adverse effect on the patient, the MTF, or the military. Patients may spend a few dollars for over-the-counter self medication, but the long term cost is minimal. There are some benefits from this non-action to the MTF and the military. Demands are not placed on the MTF thus allowing resources to be used on other health services. The military benefits in that productive time is not lost (active duty member is not seeking time off to seek care or obtain care for his dependents).

If the medical condition, however, is symptomatic of or a prelude to more serious medical conditions, and care remains unsought, the eventual effects on the patient, MTF, and the military are quite different. An untreated streptococcal (bacterial) infection, which may initially exhibit symptoms of a

cold, could result in deafness, rheumatic fever, or pneumonia. These more serious conditions, which would require inpatient treatment would effect the individual (pain, suffering, disability, etc.), the MTF (more costly to treat an inpatient than an outpatient), and the military (lost time or inattentiveness to job performance).

Determining the direct cost of illness is difficult, if not impossible, to accomplish. Scitovsky advocates the use of the human capital approach.¹ This approach compares the costs of prevention, detection, treatment, and rehabilitation with the costs to society for lost earnings and premature mortality.

In the streptococcal infection situation mentioned above, a comparison could be made between the cost of treatment as an outpatient and the cost as an inpatient. As an outpatient, the cost would include that for medical personnel time, laboratory examinations, pharmacy antibiotic issue, and various administrative/overhead costs. As an inpatient, the cost would also include these costs. As an inpatient, however, the costs would be greatly magnified. Lost time would also be included in both cases but where 1-2 hours are lost as an outpatient, weeks, months, or longer may result from inpatient care. So, although the basic illness is the same, the costs associated with the two different types of care are widely divergent.

A recent Public Health Report predicted that the real economic cost of illness will be more than double the 1975 costs by the year 2000.² Copayments, if they act to delay the seeking of care, must cease if health status declines. Since outpatient care is recognized as being less costly than inpatient care, deterrents to the utilization of outpatient care must be carefully considered. Emphasis must, therefore, be placed on prevention and early detection.

A method for encouraging the use of preventive services would be to

eliminate the requirement for copayments for preventive health care. This "free" care would remove any financial barriers, thus encouraging the use of such services. A clear, distinct definition of what services are considered "preventive" must, however, be made.

¹ Anne A. Scitovsky, "Estimating the Direct Cost of Illness," Milbank Memorial Fund Quarterly, 60, 1982, 463-491.

² "Projecting the Economic Cost of Illness," Public Health Report, 93, September-October 1978, 500-506.

Impact on the Military

Health care is considered to be part of a comprehensive benefits package for military beneficiaries. Military members, both active duty and retired, and their dependents have come to expect these benefits at essentially no charge. Retirement compensation, exchange and commissary privileges, and health care, just to name a few, are all looked upon as rights, by-products of military duty. Service member concern over benefit erosion has had an impact on recruitment and retention.¹ Concurrently, Congress is concerned about the rising costs of military benefits as part of the total Defense Budget.

Senator Inouye, who originally suggested the \$5.00 copayment fee to offset CHAMPUS shortfalls, has recently suggested expanding CHAMPUS benefits. He has proposed that CHAMPUS cover dental expenses after allowing for family and individual deductibles.²

Except for those unusual circumstances previously mentioned, the military does not provide dental care for non-active duty beneficiaries. This lack of coverage is true even though over 70% of private sector medical plans include some form of dental coverage.³

If copayments were used, at least partially, to expand CHAMPUS benefits, such as for dental care as outlined above, then fees might be more readily accepted.

Future. Congress will continue to examine the high cost of maintaining the MHSS, including CHAMPUS. The house Armed Services Committee has scheduled a review of this problem during the current fiscal year.⁴

The potential success of the HHS Diagnosis Related Group (DRG), prospective reimbursement plan may change the structure of military medical appropriation allocations in years to come. The possibility exists for application of this DRG concept, at least partially, in the military. Cost control, which was the

genesis behind DRGs, will become more and more evident in the MHSS.

Copayments are just the beginning. Other forms of cost sharing, cost reduction, etc., will be proposed, evaluated and possibly instituted in the years to come. Military medical benefits will not remain an untouched benefit.

The present state of the national economy has benefited both recruitment and retention for all military services. A copayment at this time may have little effect on either. Once the economy stabilizes or recovers, however, the ramifications of copayments may become evident. If only 1% of active duty military members elected to leave the service because of copayments, the result would be an exodus of 21,000 trained, experienced personnel. Granted, some of these would most likely have left the military regardless of copayments. The highly sophisticated technology used in today's military, however, requires optimal retention of these technically trained personnel. The cost for training and replacing these losses could more than offset the funds generated to subsidize CHAMPUS.

The impact on the military could be substantial. Once again, speculation is fraught with uncertainties. Such potential situations must, however, be considered prior to initiating such a drastic change.

1 Rick Maze, "Navy Leaders to Seek Better Pay, Benefits," Navy Times, 8 November 1982, 1.

2 Paul Smith, "Inouye Seeks Full CHAMPUS Dental Benefit," Navy Times, 21 February 1983, 2.

3 Maze, op cit.

4 Martha Lynn Craver, "Medical Care, PCS on Hill's 83 Agenda," Navy Times, 17 January 1983, 4.

Alternatives

The proposed copayment fee is only one method of changing the financial structure of the MHSS. Other methods will be briefly discussed in this section.

One alternative to the present system would be to replace CHAMPUS with a comprehensive commercial medical insurance program. Covering all but active duty members (who, under law, are guaranteed medical care), this program could be administered similar to the Federal Employees Health Benefits Program.¹ Under the FEHBP, all federal employees are annually offered a choice of numerous plans for their medical needs and those of their families. Plans vary in coverage, premium cost, copayment and deductible rates, and health care organizational structure. Such a plan would cost individuals approximately \$1170 per family each year.² Based on an estimated 2.8 million families, the total cost to all beneficiaries would be approximately \$3.3 billion. Some families would not be eligible for participation due to assignment in foreign countries or isolated locations and other would decline participation (such as retirees with secondary employment that provides its own insurance plans.) The revenue generated when compared to CHAMPUS funding is staggering: \$3.3 billion to \$1.2 billion. The government cost for this coverage would be approximately \$1.8 billion (based on an average of 35% of premium cost³). Advantages to this alternative include beneficiary choice of plan, availability of health services not presently offered under CHAMPUS such as dental care, and the removal of restrictions to certain beneficiaries such as dependent parents and those beneficiaries over 65 years of age (as specified in individual plans). Disadvantages include cost to both the individual and the government and the loss of access control to non-MHSS health care as currently exists in the CHAMPUS program.

Another alternative, as recommended by Ford⁴, would be for CHAMPUS to contract, by area, with HMOs or PPOs in order to reduce costs. An HMO-CHAMPUS experiment is presently being conducted.⁵ If under optimal contracting a 10% reduction in CHAMPUS costs would result, an estimated \$120 million would be saved.

A final alternative considered is really a variation of the first. This alternative would be to acquire comprehensive commercial insurance as described above and, except for active duty service members, discontinue care in the MHSS. Cost savings to the government would be enormous. Hospitals could close or be sold. Medical personnel requirements could be drastically reduced. Other changes, however, would also be necessary. Civilian hospital participation in the CMCHS program would have to be increased, reserve medical personnel requirements and training would need to be increased, temporary hospitals or other MTFs would have to be established, all to meet contingency or wartime requirements. The total cost savings or cost shifting as well as the effects on military readiness are impossible to estimate and further discussion would be beyond the scope of this paper.

Obviously, many other forms of providing military health care services to eligible beneficiaries are possible. The four alternatives presented here all deal in some way with the concept of cost savings. Other alternatives dealing with reduction in eligibility, further expansion of military health care services, utilization of emerging forms of health care such as home health care or hospices, a full cost reimbursement basis for the performance of elective or nonemergent procedures, and the collection for MHSS provided services from third party payers are some examples of other alternatives which may be considered in future research.

These alternatives, together with the present MHSS and the proposed copayment plan, were then evaluated to determine the degree that each satisfied

the previously determined criteria. These criteria are:

- C1: Minimize economic barriers to health care utilization (cost) to individual patients-
- C2: Minimize the cost to the government for providing health care to eligible beneficiaries-
- C3: Minimize the impact of change on the operation of the MTF-
- C4: Maximize the health status of the beneficiary population by encouraging the use of preventive rather than curative health care.

Alternatives:

- A1: MHSS as it currently exists
- A2: Proposed \$5.00 copayment for outpatient care in the MHSS
- A3: Comprehensive commercial health insurance to replace CHAMPUS
- A4: CHAMPUS-HMO contracting
- A5: Comprehensive commercial health insurance and disestablishment of MTFs in the United States.

Using a modified Churchman-Ackoff analysis, the alternatives were measured against the criteria (using a scale of 0-9 with 0 reflecting minimal compliance and 9 maximal compliance). The results of this analysis are shown in Table 18.

TABLE 18
ANALYSIS OF ALTERNATIVES

		CRITERIA				
		C1	C2	C3	C4	TOTAL
ALTERNATIVES	A1	8	4	9	6	27
	A2	6	8	7	6	27
	A3	1	1	8	6	16
	A4	8	5	9	7	29
	A5	1	1	0	6	8

Alternatives 3 and 5 will undergo no further evaluation because of their

low total scores resulting from the extremely high costs involved.

Alternative 4, CHAMPUS contracting with HMOs/PPOs, reflects maximum compliance with the established criteria. The only differences between this alternative and the present system (A1) is the slightly lower cost and the higher factor assigned for health status (assigned due to the preventive emphasis in HMOs). However, since alternative 4 is presently in progress and will continue regardless of this evaluation, and would essentially be in addition to both A1 and A2, it will not be considered as an optimal solution in its own right.

Alternatives 1 and 2 result in the same factor total (as evaluated by this author). This same outcome is because reductions in one are offset by increases in the other and vice versa. A final decision cannot be made from this analysis alone. More subjective factors such as retention, morale, mission, and the dictates of governmental decision-makers will determine the optimal solution. Based solely on this analysis, however, this author concludes that copayments would not adversely effect the MHSS, and, therefore, the optimal solution, would be to either retain the existing no-fee sytem or to impose the \$5.00 copayment system proposed..

1 U. S. Office of Personnel Management, Federal Employees Health Benefits Enrollment Information and Plan Comparison Chart, BRI 41-331, Washington, D. C., January 1983.

2 As estimated in an unofficial information sheet distributed by the Navy Pay and Finance Center, Cleveland, Ohio, dated 15 November 1982.

3 This estimate was obtained from the Comptroller, Naval Medical Command, National Capital Region, Bethesda, Md. It was based on the government's share of insurance premiums as paid for civilian employees.

4 Raymond L. Ford, "The HMO Concept in Military Health Care," Military Medicine, 145, May 1980, 284-285.

5 Paul Smith, "New Rules to Cut CHAMPUS Use, Reduce Costs," Navy Times, 22 November 1982, 1.

III. RECOMMENDATIONS AND CONCLUSION

Recommendations

Should copayment fees be mandated, implementation plans must be prepared. As a minimum, the following should direct collection proceedings.

1. Ensure that all beneficiaries are made aware of copayment fees and date of initiation.
2. Begin construction/alteration plans, employee recruitment, and supplies/equipment procurement.
3. Establish the outpatient collection branch organizationally as a sub-unit of the Comptroller or Finance Department.
4. Ensure that collection sites do not impede traffic flow, are secure, and easily accessible.
5. Develop patient flow pattern and collection procedures. Collections should be made prior to the rendering of health care. A receipt of collection could be presented to the health care provider reflecting completion of payment processing. Those patients unable to pay should be presented a bill/invoice for the copayment fee and information on payment submission.
6. Inform staff personnel of payment processing procedures and retrieval/verification of receipts.
7. Provide for after-hours collection procedures.
8. Provide for cash retrieval and deposit procedures.
9. Provide for billing follow-up and the charging of interest on delinquent payments.
10. Ensure that routine audits are conducted at collection sites as well as treatment areas.

Obviously the issues listed above will not account for every circumstance. Procedures must, to some extent, be tailor-made for the facility. Communication to the beneficiary population and the MTF staff are two steps that, when taken, will result most effectively in reducing procedural errors and patient dissatisfaction. Technological advances such as electronic cash registers can also help patient satisfaction by reducing collection processing time.

Except for inpatient care, military medicine has for most staff and patients been free of monetary exchange. Many patients now complain of the impersonal medical care they receive at military MTFs. Add to this perceived "impersonality" the collection of money and patients may begin to seek health care elsewhere.

Staff personnel, who will become both providers and paying consumers, must be taught to develop business ethics in addition to the compassion so necessary in delivering health care. The conflict resulting from such disparate functions may reduce staff morale and further the rendering of "impersonal" care.

Implementation planning must begin as soon as possible after the decision to collect fees is made. Copayment collection may become a source of intense staff and patient frustration. Only through detailed, effective planning can such frustrations be reduced.

If copayments are begun, concurrent and retrospective analysis of demand change must also begin. Although this present study does not reflect a change of demand in a prospective sense, actual results may be substantially different. Due to distance or other health insurance coverage, many beneficiaries do not routinely use the MHSS. The sample used in this study did not include such beneficiaries. Although copayment impact on these individuals is anticipated to be negligible, future studies should attempt to evaluate utilization change in this group.

Conclusion.

What are the implications of imposing a "nuisance" or "clinic" fee on military beneficiaries in the MHSS? This research has attempted to predict the effects of copayments in the MHSS. Because of the prospective nature of this research, most results are speculative and do not rely on "hard data."

The following results are discussed in detail elsewhere in this presentation and summarized here:

1. Patient demand for health care services will not change because of the copayment fee.
2. Copayments will substantially contribute to CHAMPUS funding.
3. Copayment collections will increase patient waiting time and may otherwise contribute to patient dissatisfaction.
4. If demand should at some later date decrease because of copayments, health status may decline and the total cost of medical care may increase.
5. Consumers are opposed to copayments but feel they have little recourse.
6. As paying consumers, patients may place additional demands on the MTFs.
7. Copayments will impact on the administrative procedures of MTFs but should have negligible impact on the delivery of health care.
8. Retention and morale of military members may be effected if copayments are perceived as a decrease in benefits.

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APPENDIX A

SUMMARY OF FACTORS AFFECTING HEALTH CARE UTILIZATION
BY AUTHOR

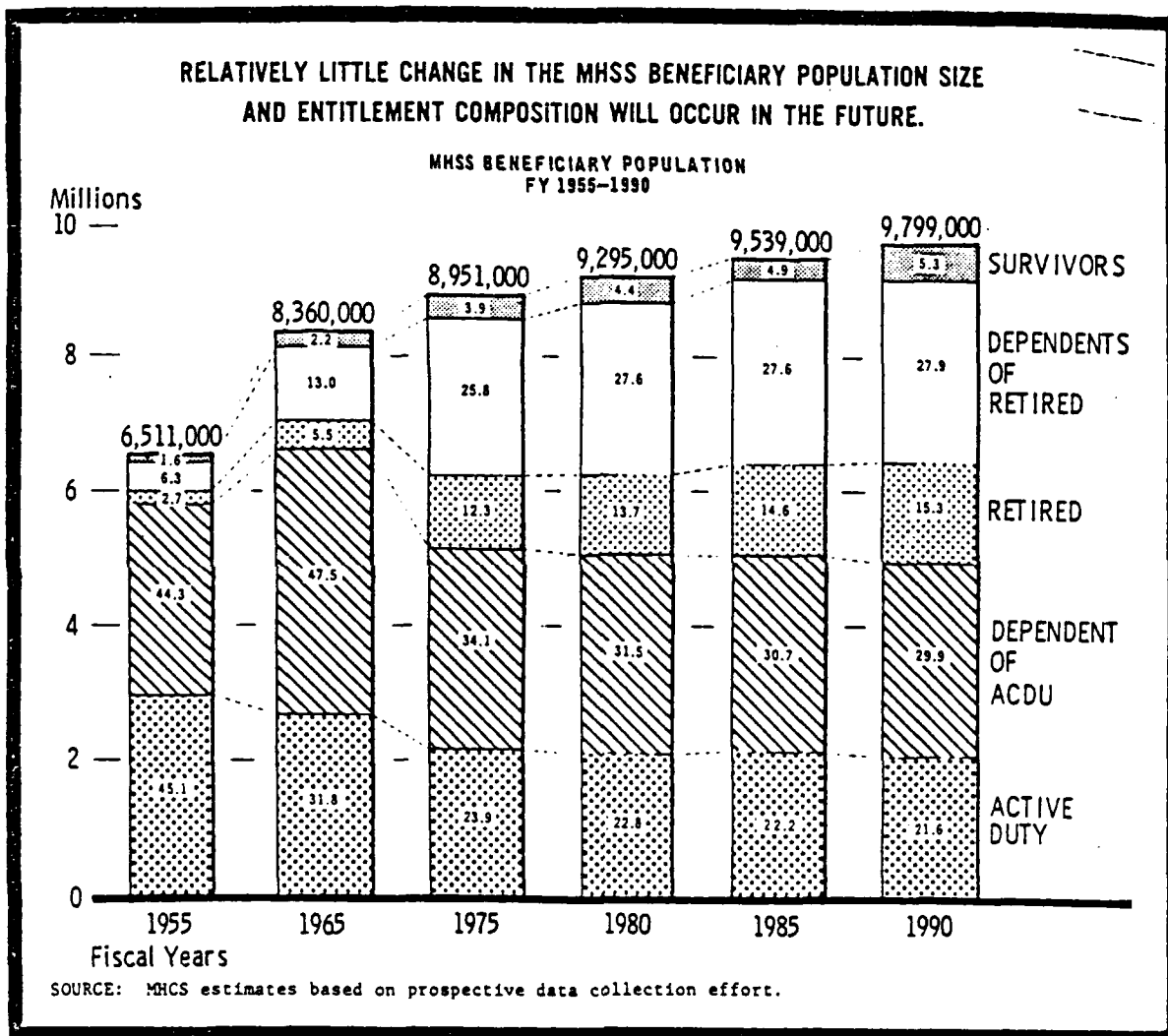
SUMMARY OF FACTORS AFFECTING HEALTH CARE UTILIZATION BY AUTHOR

<u>Author</u>	<u>Factors discussed</u>
Aday	Time, cost
Anderson	Demographics, organization, distance, sociopsychological
Anderson & Bartkus	Distance, availability, symptom sensitivity
Apostle & Oder	Socioeconomic
Beck	Copayments
Berkanovic & Reeder	Perceived symptoms, ability to pay, cultural, social class, psychological, ethnic group
Berki & Ashcraft	Need, price, access, health concern
Berki & Kobashigawa	Need, education, income, health status
Blue Cross/Blue Shield	Physicians, copayments, deductibles
Courtwright	Health status
Detwiller	Health status
Dyckman	Copayments
Friberg & Scutchfield	Insurance
Hadley, Holahan, Scanlon	Physicians
Hadley & Osei	Income
Hardwick	Age, sex, marital status, income, education, deductibles, copayments, etc.
Hennelly	Payment method, severity of illness, referral status
Horty	Costs
Hulka	Patient satisfaction
Jackson & Greenlick	Health status
Joseph	Organization, health status, price
Kirscht	Symptoms (Health status)
Kleinman	Income, race
Leveson	Education, health status, cost
Mullooly & Freeborn	Age, sex, socioeconomic background, health status
Newhouse, Phelps, Schwartz	Price, insurance, time
Nutting	Size of organization, payment mechanism
Phelps & Newhouse	Copayments
Rethmeier	Patient satisfaction
Roemer	Copayments
Rundall & Wheeler	Income
Scitovsky (78)	Copayments, distance
Scitovsky (79)	Copayments
Scitovsky & Snyder	Copayments
Showstack	Physicians
Strattman	Economic, temporal, convenience, sociopsychological, quality of care
Ward	Patient satisfaction
Weiss & Greenlick	Social class, distance
Weiss et al	Distance, race, education
Wolfe	Patient satisfaction
Wolfson et al	Copayments, physicians

APPENDIX B

SELECTED EXCERPTS FROM VARIOUS MILITARY
HEALTH CARE STUDIES

The following charts and graphs were selected from the various sources indicated. Additional background information and discussion on these illustrations can be obtained from the source.



Source: Report of the Military Health Care Study, Department of Defense, Department of Health, Education and Welfare, and Office of Management and Budget, U. S. Government Printing Office, Washington, D. C. 1975, page 25.

KAISER ENROLLEES USE MORE IN-SYSTEM OUTPATIENT SERVICES THAN MHSS NONACTIVE DUTY BENEFICIARIES.

ANNUAL OUTPATIENT UTILIZATION

<u>Patient Sex and Age</u>	<u>Visits Per 1,000 Persons (a)</u>	
	<u>Nonactive Duty Beneficiaries (b) (Direct Care and CHAMPUS)</u>	<u>Kaiser Enrollees</u>
<u>Male</u>		
0-14	4265.8	5349.6
15-44	2757.0	4033.0
45-64	4006.5	5820.0
65+	5090.5	7774.0
<u>Female</u>		
0-14	3562.7	4516.2
15-44	6223.9	6538.5
45-64	4684.5	7312.0
65+	3776.1	8209.8

- (a) Rates are for visits to all providers (physicians and others). Comparable data are not available from the U.S. noninstitutionalized population.
- (b) Rates for beneficiaries 65+ reflect the loss of CHAMPUS entitlements by most beneficiaries and are not comparable to Kaiser rates.

SOURCE: FY 1974 data from Northern California prospective data collection effort and Kaiser Foundation of Northern California.

Source: Report of the Military Health Care Study, Department of Defense, Department of Health, Education and Welfare, and Office of Management and Budget, U. S. Government Printing Office, Washington, D. C. 1975, page 35.

PRINCIPAL MHSS BENEFICIARIES HAVE HIGHER OPINIONS OF CIVILIAN THAN OF MILITARY CARE

OPINIONS ON MILITARY AND CIVILIAN HEALTH CARE

Statement	CALIFORNIA Percent Answering				TEXAS Percent Answering			
	True of Military	True of Civilian	Military True - Civilian False	Military False - Civilian True	True of Military	True of Civilian	Military True - Civilian False	Military False - Civilian True
The overall quality of health care is satisfactory	84.0	84.5	8.2	12.5	77.5	77.4	5.0	13.8
You are given enough information about your problems	65.2	74.5	10.3	23.6	52.5	65.0	6.1	25.5
You are given enough information about what you should do at home	80.5	83.2	5.3	11.8	75.6	75.5	4.4	11.3
It is too hard to get to talk to the doctor by telephone about a problem	64.3	45.9	26.2	9.5	55.5	39.7	22.7	5.8
Hospitals are well run and efficient	70.8	71.1	8.9	12.6	57.1	63.3	3.5	15.9
Waiting rooms are unpleasant or crowded	62.0	45.3	21.7	7.5	72.5	46.4	18.9	2.4
There is too much paperwork and too much red tape	35.9	46.4	11.4	23.4	54.3	39.4	19.6	9.4
Doctors are well trained or competent	81.4	89.0	3.0	13.3	74.2	81.8	1.1	14.2
Doctors and other staff are very pleasant and nice	75.1	85.0	4.6	17.6	70.0	79.7	2.3	17.0
You are restricted to one group of doctors	31.4	19.3	23.4	12.1	25.1	18.6	17.1	10.9
You can choose the doctor you want	20.9	87.2	1.2	66.5	14.7	79.8	1.2	60.8
Costs are too high	3.4	86.8	0.2	82.8	1.8	78.6	0.2	74.6
Care is inconvenient or too hard to get	35.5	23.6	24.3	13.0	38.6	18.0	24.2	7.7
Too many services are provided by non-physicians (people who are not M.D.s)	32.6	13.6	23.0	5.6	47.2	11.8	28.6	1.2
Care is hard to get outside of regular office hours	47.2	57.3	14.4	24.9	50.7	49.5	16.1	19.4
Emergency care is too difficult to get	18.1	19.8	11.0	13.0	26.4	17.1	11.9	6.3
Care by specialists is too hard to get	38.0	23.2	24.9	11.0	36.2	23.3	19.8	8.9
You cannot get a physician who understands your family's medical problems	36.6	11.8	27.8	3.4	36.6	12.6	25.8	4.2

SOURCE: MHCS prospective data collection effort.

Source: Report of the Military Health Care Study, Department of Defense, Department of Health, Education and Welfare, and Office of Management and Budget, U. S. Government Printing Office, Washington, D. C. 1975, page 37.

THE MODEL SHOWS THAT ADDITIONAL COST WOULD BE INCURRED BY
CONTRACTING LARGE AMOUNTS OF CARE TO KAISER OR BLUE CROSS.

COMPARISON OF TOTAL COSTS ASSOCIATED WITH
SHIFTS OF BENEFICIARIES TO CIVILIAN INSURANCE OR
PREPAID GROUP PROGRAMS: MODEL I

(Adjusted Inpatient Admissions and Unadjusted Outpatient Visits)

Description of Alternative	Marginal to Average Cost Ratio(a)	Total Cost (Millions)(b)	Difference From Present Case More (Less) (Millions)(b)
<u>Case A:</u> Present Case (Actual FY 1974 Costs)	--	\$2,097	--
<u>Case D:</u> All Nonactive Duty Dependents are Trans- ferred to Alternative Programs			
Kaiser North	.50	\$2,448	\$351
	.75	2,239	142
	.96	2,064	(33)
Kaiser South	.50	2,789	692
	.75	2,580	483
	.96	2,405	308
Blue Cross	.50	2,614	517
	.75	2,405	308
	.96	\$2,230	\$133
<u>Case DR:</u> All Retired, Retiree Dependents and Survivors are Trans- ferred to Alternative Programs			
Kaiser North	.50	\$2,494	\$397
	.75	2,412	315
	.96	2,343	246
Kaiser South	.50	2,679	582
	.75	2,598	501
	.96	2,529	432
Blue Cross	.50	2,583	486
	.75	2,501	404
	.96	\$2,433	\$336

(a) Direct Care System.

(b) The results derived from Model IA and II are in the same direction as those from Model I; the magnitude of the costs or savings is greater using these cost structures.

Source: Report of the Military Health Care Study, Department of Defense, Department of Health, Education and Welfare, and Office of Management and Budget, U. S. Government Printing Office, Washington, D. C. 1975, page 68.

**THE MODEL SHOWS THAT ADDITIONAL COST WOULD BE INCURRED BY MOVING
LARGE AMOUNTS OF CARE TO CHAMPUS**

**COMPARISONS OF TOTAL COSTS ASSOCIATED WITH
LARGE SHIFTS OF WORKLOAD FROM MILITARY MEDICAL FACILITIES TO CHAMPUS: MODEL I**
(Adjusted Inpatient Admissions and Unadjusted Outpatient Visits)

<u>Description of Alternative</u>	<u>Marginal to Average Cost Ratio(a)</u>	<u>Total Cost (Millions)(b)</u>	<u>Difference From Present Case More (Less) (Millions)(b)</u>
<u>Case A:</u> Present Case (Actual FY 1974 Costs)		\$2,097	
<u>Case E1:</u> 6,000 Physicians:	.50	2,865	\$768
61% of Direct Care	.75	2,667	570
Workload Moved to CHAMPUS	.96	2,501	404
<u>Case E2:</u> 8,000 Physicians:	.50	2,591	494
39% of the Direct	.75	2,464	367
Care Workload Moved to CHAMPUS	.96	2,357	260
<u>Case E3:</u> 10,000 Physicians:	.50	2,315	218
17% of the Direct	.75	2,260	163
Care Workload Moved to CHAMPUS	.96	2,213	116

(a) Direct Care System.

(b) The results derived from Model IA and II are in the same direction as those from Model I; the magnitude of the costs or savings is greater using these cost structures.

Source: Report of the Military Health Care Study, Department of Defense, Department of Health, Education and Welfare, and Office of Management and Budget, U. S. Government Printing Office, Washington, D. C. 1975, page 70.

COMPARISON OF CHAMPUS AND SIX OTHER HEALTH PLAN BENEFIT PACKAGES

HEALTH BENEFIT PLAN	COVERAGE										SUBSCRIBER CONTRIBUTION	
	EMPLOYEE AND DEPENDENT										EMPLOYEE	RETIREE
	Inpatient					Outpatient						
	Major Medical					Major Medical						
	Days of Coverage Per Beneficiary	Indeductible	Other Cost-Sharing	Deductible	Other Cost-Sharing	Indeductible	Other Cost-Sharing	Life-Time Benefit Limit	RETIREE AND DEPENDENT (s)			
CHAMPUS	Unlimited	None	\$25 per admission or \$3.70 per day whichever is greater	\$50 per person per year, not to exceed \$100 per family	20% coinsurance	All coverage is inpatient or outpatient	\$100 per beneficiary per year not to exceed \$200 per family	20% coinsurance	None	Basic benefits are same as for active duty but no services are subject to 25% coinsurance	None	None
FEDERAL EMPLOYEES BLUE CROSS-BLUE SHIELD HIGH OPTION	95 per confinement	None	None	Covered by major medical			\$100 per beneficiary per year not to exceed \$200 per family	20% coinsurance	\$250,000 per family	No change	40% of premium	40% of premium
EASTMAN-KODAK	120 per confinement	None	None	Covered by major medical			\$100 per beneficiary per year, not to exceed \$250 per family	20% coinsurance	\$100,000 per automatic reinsurance of \$25,000 per beneficiary per year	No change	70% of premium for inpatient coverage; 50% of premium for major medical	50% of premium if less than 15 years of service; 50% of premium for more than 15 years of service
UNITED MINE WORKERS	Unlimited	None	None	None	None	All coverage is inpatient or outpatient			None	No change	None	None
MARITIME UNION	120 per year	None	Indemnity payment	Covered by major medical except prescription drugs for which there is a \$2 copayment per prescription			\$100 per family per year	20%	\$10,000 per family with automatic reinsurance of \$2,000 per year	No change in coverage or cost sharing but life time benefit limit is \$750 per family	None	None
ADMINISTRATION-PROPOSED COMPREHENSIVE HEALTH INSURANCE	Unlimited	Covered by major medical	Covered by major medical	Covered by major medical except for prescription drugs which are subject to a \$50 deductible per beneficiary per year and 25% coinsurance			\$150 per beneficiary not to exceed \$450 per family (deductible and drug deductible)	25%	None	No change	5% or less of premium, as negotiated by employer and employee	As negotiated by employer and employee
KENNEDY-MILLS-PROPOSED COMPREHENSIVE HEALTH INSURANCE	Unlimited	Covered by major medical	Covered by major medical	Covered by major medical except for prescription drugs which are subject to a \$50 deductible per beneficiary per year and 25% coinsurance			\$150 per beneficiary not to exceed \$450 per family (deductible and drug deductible)	25%	None	No change	1 to 2-1/2% of income	As negotiated by employer and employee

(*) CHAMPUS beneficiaries eligible for Medicare lose their CHAMPUS entitlement. In other plans, Medicare becomes first payer.

Source: Report of the Military Health Care Study, Department of Defense, Department of Health, Education and Welfare, and Office of Management and Budget, U. S. Government Printing Office, Washington, D. C. 1975, page 72.

COMPARISON OF SELECTED BENEFIT PROVISIONS: CHAMPUS AND SIX OTHER HEALTH PLANS				
HEALTH BENEFIT PLAN	INPATIENT PSYCHIATRIC CARE	REHABILITATION SERVICES (SERVICES TO RESTORE SENSE OR MOVEMENT FOLLOWING ILLNESS OR INJURY)	EXTENDED CARE	CHRONIC CARE AND TREATMENT (HANDICAPPING CONDITIONS)
CHAMPUS	An inpatient benefit; unlimited coverage with inpatient cost-sharing.	Covered by inpatient and/or outpatient benefits.	Covered by basic inpatient benefits.	Benefit for dependents of active duty members only. Coinsurance varies according to pay grade from \$25 to \$250 per month. Government pays remainder up to \$350 per month.
FEDERAL EMPLOYEES BLUE CROSS-BLUE SHIELD HIGH OPTION	Covered by basic inpatient and major medical: 365 days per confinement under basic benefits. Additional days with major medical cost-sharing. However, lifetime maximum major medical benefit for psychiatric care is \$50,000 per beneficiary.	Covered by major medical.	None.	None.
EASTMAN-KODAK	Covered by basic inpatient and major medical: 120 days per admission under basic benefits. (Admissions must be separated by at least 60 days.) Additional days with major medical cost-sharing.	Covered by major medical.	Covered by basic inpatient benefits: 2 days for every unused acute care day, up to 365 days per beneficiary per lifetime. Custodial care is excluded.	Some special schools (or children covered under major medical) schools must provide education and physical and/or mental therapy. Custodial care, care for mentally retarded and children with dyslexia specifically excluded.
UNITED MINE WORKERS	For acute episodes only, as arranged by UMW welfare fund.	Covered by inpatient and/or outpatient benefits.	Following hospitalization, as arranged by UMW welfare fund. Care is not provided for aged or chronically ill.	None.
MARITIME UNION	Covered by basic inpatient and major medical: 120 days per beneficiary per year with hospital room allowance of \$36 per day & a total of \$500 for ancillary services under basic benefits. Additional days & charges in excess of basic benefit coverage with major medical cost-sharing.	Covered by major medical.	None.	None.
ADMINISTRATION-PROPOSED COMPREHENSIVE HEALTH INSURANCE	Covered by major medical: 30 days per beneficiary per year with major medical cost-sharing.	Covered by major medical.	Covered by major medical: 100 days following hospitalization.	Covered by major medical.
KENNEDY-MILLS-PROPOSED COMPREHENSIVE HEALTH INSURANCE	Covered by major medical: 30 days per beneficiary per year with major medical cost-sharing.	Covered by major medical.	Covered by major medical: 100 days following hospitalization.	Covered by major medical.

Source: Report of the Military Health Care Study, Department of Defense, Department of Health, Education and Welfare, and Office of Management and Budget, U. S. Government Printing Office, Washington, D. C. 1975, page 73.

**QUALITY OF CARE IN THE MHSS, KAISER AND THE U.S. OVERALL,
AS SUGGESTED BY SELECTED INDICATORS, COMPARES FAVORABLY.**

COMPARISON OF SELECTED INDICATORS OF HEALTH CARE QUALITY (a)

Index of Process or Outcome	Rate/ Measure	Care System		
		MHSS	Kaiser	U.S. Overall
All Non-Gynecological Surgical Procedures	Per 1,000 beneficiaries	56.0	33.1	67.0
Tonsillectomy/Adenoidectomy	Per 1,000 beneficiaries	2.95	1.67	4.6
Hysterectomy for Females All Ages	Per 1,000 beneficiaries	7.67	4.23	6.48
Appendectomy ≤ 9 Years ≥ 10 Years	Per 1,000 beneficiaries	1.0 1.4	0.6 1.1	1.6
Surgical Infections	Per 1,000 procedures	5.4 (b)	8.3	7.4
Prematurity Rate	Per 1,000 live births	46.3 (b)	39.6	94.0
Perinatal Mortality Rate	Per 1,000 live births and fetal deaths	13.6 (b)	13.4	21.5
Admissions for Diabetic Acidosis -- Male -- Female	Per 1,000 beneficiaries	0.07 (b) 0.16 (b)	0.16 0.20	N/A N/A
Myocardial Infarction: Case Fatality	Percent of cases	13.9% (b)	12.7%	N/A
Autopsy Rate	Percent of hospital deaths	78.9% (b)	44.0%	N/A
Cervical Pap Tests	Per 1,000 female benefi- ciaries (all ages)	503.0	566.0	N/A

(a) Generally accepted indices or standards for health care quality have not been established.

(b) MHSS rate does not include CHAMPUS.

SOURCE: FY 1974 data on military medical facilities and CHAMPUS providers in Northern California from Service and OCHAMPUS fees. Rates developed using MHCS population estimates.

CY 1973 Kaiser rates from the Kaiser facilities of Northern California.

CY 1973 U.S. rates from the National Center for Health Statistics (unpublished data).

Source: Report of the Military Health Care Study, Department of Defense, Department of Health, Education and Welfare, and Office of Management and Budget, U. S. Government Printing Office, Washington, D. C. 1975, page 75.

USUAL SOURCE OF CARE
ALL BENEFICIARIES

California

<u>Beneficiary Category</u>	<u>Military Clinic</u>	<u>Civilian Clinic</u>	<u>Private M.D.</u>	<u>Other</u>	<u>No Usual Place</u>
Active Duty (107048)*	96.2%	0.8%	2.2%	0.4%	0.4%
Dependents of Active Duty (140911)	88.6%	2.7%	8.0%	0.2%	0.3%
Retired (69205)	67.2%	8.0%	23.0%	0.7%	1.1%
Dependents of Retired (139032)	63.3%	9.4%	26.1%	0.3%	0.7%
Survivors/Active Duty (8620)	37.4%	6.3%	53.6%	0.2%	1.7%
Survivors/Retired (4302)	52.0%	5.3%	40.9%	0.9%	0.8%
All Beneficiaries: 469118	78.4%	5.1%	15.4%	0.3%	0.6%
			Texas		
Active Duty (40512)	95.7%	2.0%	1.8%	0	0.5%
Dependents of Active Duty (41654)	87.4%	6.0%	6.1%	0.2%	0.4%
Retired (6475)	56.6%	19.5%	18.1%	2.1%	3.6%
Dependents of Retired (13248)	58.4%	12.7%	24.5%	0	4.2%
Survivors/Active Duty (2071)	12.8%	18.9%	66.0%	0	1.1%
Survivors/Retired (103)	0	0	100.0%	0	0
All Beneficiaries: 104063	83.4%	6.4%	8.8%	0.2%	1.2%

Source: Report of the Military Health Care Study, Department of Defense, Department of Health, Education and Welfare, and Office of Management and Budget, U. S. Government Printing Office, Washington, D. C. 1975, page 1173.

% OF MHSS BENEFICIARIES COVERED BY HEALTH INSURANCE

Age/Sex	Private Insur.	Prepaid Group	Medicare			Dental	
			Part A	Part B	Supple.	Compre- hensive	Emer- gency
Male, 0-14	14.3	2.7	1.9	1.1	.9	5.5	4.5
Male, 15-44	17.6	3.1	2.5	1.3	1.1	7.6	4.3
Male, 45-64	35.1	7.3	3.3	2.3	1.1	11.7	3.5
Male, 65+	30.3	4.9	61.0	54.4	39.5	3.9	1.7
Female, 0-14	15.4	4.0	1.3	1.1	1.0	8.2	6.1
Female, 15-44	22.8	5.5	2.7	1.2	1.0	9.8	4.4
Female, 45-64	34.3	5.6	3.8	3.0	1.8	9.9	2.7
Female, 65+	35.6	6.3	64.2	57.0	38.0	3.4	1.9
<u>Status</u>							
ACDU-Sponsor	5.8	1.6	2.5	1.2	1.0	3.4	3.2
ACDU-Spouse	8.0	2.6	2.7	1.0	.9	5.0	3.9
ACDU-Other	5.9	2.0	2.4	1.1	.8	3.6	5.1
Retired-Sponsor	35.4	7.4	12.3	10.5	7.1	11.6	3.3
Retired-Spouse	36.2	7.4	9.3	7.8	4.9	11.7	3.0
Retired- Other	32.2	5.7	2.9	1.8	1.6	11.4	5.5
Survivor-Spouse	33.8	5.0	27.2	25.1	16.5	4.8	1.6
Survivor-Other	21.3	1.4	9.4	7.3	3.8	9.0	5.2
<u>Family Income</u>							
Less than \$10,000	11.2	2.2	11.1	8.2	4.8	3.3	3.0
\$10,000-24,999	24.5	4.8	6.7	5.3	3.9	7.7	3.2
\$25,000-40,000	36.8	8.3	5.3	4.7	3.2	16.4	5.7
Over \$40,000	41.6	7.0	9.1	9.1	7.4	16.9	8.4
<u>Total</u>	24.4	4.9	7.4	5.9	4.1	8.6	3.9

Source: Charles W. Wrightson, Jr. and Bette J. Schmidt, Military Health Services Utilization Survey, a report prepared under contract by CSF, Ltd. for the ASD(HA), Office of Planning and Policy Analysis, Washington, D. C., October 1978, page 4-9.

Usage of MISS by Beneficiary Class (Total Sample)

Usage Pattern	Active Duty Military	Dependents of Active Duty Military	Retired Military	Dependents of Retired Military	Survivors of Active Duty Military	Survivors of Retired Military
Direct Care Only	77.1%	56.2%	39.3%	37.2%	20.8%	30.5%
Direct Care and CHAMPUS	.6	7.2	4.3	4.1	4.2	5.9
CHAMPUS only	.0	3.3	5.5	8.1	7.6	9.2
Direct Care and Other Civilian	8.5	13.1	14.8	10.3	7.8	14.8
Civilian Only	.9	5.4	16.8	17.4	46.7	26.3
VA Only	0	0	18.8	0	0	0
No Health Care Past 12 Mos.	12.8	14.7	.4	22.9	12.9	13.3
Total N	2837	5757	2339	4474	448	338

Source: Richard J. Orend and Richard D. Rosenblatt, Military Health Services System: Non-user and User Perceptions and Evaluations, Human Resources Research Organization, Alexandria, Va., June 1977, page 45.

Percent of Families Subscribing to Different Non-MHS Health Insurance Plans

	Type of Outside Insurance						Total
	Blue Plan	Dental Only	Kaiser	CHAMPUS Supp.	Other	Student	
All Families	19.1% (276)	3.6% (52)	8.0% (116)	17.3% (249)	51.2% (738)	0.8% (11)	100% (1442)
California Families	18.9 (248)	4.4 (52)	8.9 (116)	17.9 (234)	49.5 (649)	0.8 (11)	100% (1310)
Texas Families	21.2 (28)	0.0 (0)	0.0 (0)	11.4 (15)	62.4 (89)	0.0 (0)	100% (132)

Source: Richard J. Orend and Richard D. Rosenblatt, Military Health Services System: Non-user and User Perceptions and Evaluations, Human Resources Research Organization, Alexandria, Va., June 1977, page 52.

Satisfaction by Type of Service (All Families)

Type of Service	LEVEL OF SATISFACTION					Total
	Not at All Satisfied	Not Too Satisfied	No Observation	Generally Satisfied	Completely Satisfied	
1. Wait on phone before asking for appointment	9.2% (530)	14.2% (816)	7.4% (422)	40.4% (2313)	28.8% (1651)	5732**
2. Wait on phone to get appointment	10.3% (589)	21.1% (1210)	6.7% (382)	37.9% (2174)	24.0% (1376)	5731
3. Time on phone in emergency*	16.5% (294)	24.5% (436)	12.1% (216)	46.9% (837)	--	1783
4. Courtesy by doctors	2.8% (162)	8.8% (507)	.3% (17)	35.9% (2062)	52.1% (2988)	5736
5. Courtesy by nurses	2.1% (118)	8.0% (456)	4.0% (232)	38.3% (2196)	47.6% (2729)	5731
6. Courtesy by those making appointment	4.3% (248)	13.2% (758)	2.6% (151)	43.6% (2492)	36.2% (2073)	5722
7. Courtesy by those who make appointments when urgent*	17.2% (172)	39.1% (391)	17.3% (173)	26.3% (263)	--	999
8. Courtesy by receptionist	2.6% (150)	9.2% (526)	2.0% (110)	46.8% (2685)	39.4% (2258)	5735
9. Courtesy by medical staff	3.6% (206)	11.8% (675)	2.5% (144)	44.2% (2533)	37.9% (2172)	5730
10. Doctor's care	3.1% (160)	10.5% (602)	.6% (33)	37.6% (2151)	48.2% (2761)	5727
11. Medical care--day or night	8.8% (505)	18.3% (1048)	4.7% (270)	29.2% (1670)	38.9% (2280)	5721
12. See various doctors	7.5% (432)	16.4% (938)	3.5% (200)	33.2% (1897)	39.4% (2255)	5722
13. One doctor for health problems	17.5% (1001)	20.0% (1143)	3.7% (214)	25.9% (1484)	32.9% (1880)	5722
14. X-ray tape	9.9% (565)	13.3% (1047)	1.4% (83)	40.8% (2334)	29.6% (1697)	5726
15. Type of service covered	4.0% (229)	11.3% (646)	1.4% (83)	42.0% (2406)	41.3% (2364)	5728

Source: Richard J. Orend and Richard D. Rosenblatt, Military Health Services System: Non-user and User Perceptions and Evaluations, Human Resources Research Organization, Alexandria, Va., June 1977, page 73.

Summary of Military vs. Civilian Health Care Evaluations

	Civilian Better	Neither-No Difference	Both - Positive or Negative	Military Better
MILITARY VERSUS CIVILIAN:				
Dental Care	10.1%	88.1%	.5%	1.3%
Emergency Care	4.9	78.7	.8	15.5
Specialists	4.1	95.0	.6	2.4
Pharmacy Service	.7	95.1	.1	4.1
Preventive Care	2.8	93.4	.2	3.6
Long-Term Care	.2	99.6	-	.3
Comprehensiveness	1.1	93.2	.1	5.6
Services	1.0	98.2	.0	.8
Physicians	13.8	54.9	4.8	26.4
Corpsmen	4.5	93.8	.1	1.7
Nurses	.7	97.7	.1	1.5
Dentists	1.0	97.5	-	1.4
Personnel	.6	99.2	-	.2
Staff	.3	99.1	-	.6
Hospital Plant	5.2	84.1	.7	10.0
Ambiance	4.7	93.0	.2	2.1
Togetherness	.2	94.3	-	5.5
Doctor's Concern	20.1	69.2	2.2	8.5
Staff Concern	5.2	92.7	.2	1.8
Doctor's Courtesy	2.0	94.5	.2	3.3
Staff Courtesy	2.0	96.3	.1	1.6
Inpatient and Provider Communication	2.2	95.3	.2	2.3
Proximity to Home	17.8	66.7	1.8	13.8
Appointment East	35.1	56.1	2.6	6.2
Choice of Doctors	3.5	96.2	.1	.2
Waiting Time in Office	25.0	70.2	1.2	3.7
Other Waiting Time	3.7	95.3	.1	.9
Out-of-Town Care	.3	58.7	-	1.0
Champus Alternative	2.1	93.9	.2	3.8
Red Tape	3.6	94.0	.1	2.3
System Communication	.8	99.0	-	.2
Medical Records	2.8	95.1	.1	1.9
Dependent Care	2.1	96.1	.1	1.8
System Organization	3.0	96.1	.1	.9
Cost	.5	26.1	.6	72.9
Sense of Security	3.1	94.5	.1	2.3
Continuity of Care	16.0	81.6	.6	1.8
Patient's General Attitude Toward	.1	99.3	-	.7
Screening Process	3.6	96.1	-	.3
Preferential Treatment	8.7	89.8	.3	1.2

Source: Richard J. Orend and Richard D. Rosenblatt, Military Health Services System: Non-user and User Perceptions and Evaluations, Human Resources Research Organization, Alexandria, Va., June 1977, page 107.

Why People did Not Use CHAMPUS

Reasons	Proportion of Those Who Mentioned in Responses to Question on why did not use CHAMPUS
Good health	8.2%
Care is Limited	.9%
Use Military Care	16.1%
Other Coverage	3.8%
Haven't Needed it	7.5%
Other Reasons	0.0%
Incomplete Coverage	1.2%
Red Tape	2.0%
Short Comings	.3%
Cost	2.8%
Ineligibility	2.6%
Didn't know of Eligibility	.8%
Lack of Knowledge	6.2%
Other Reasons (Specific)	1.0%

N = 5095 valid cases

Source: Richard J. Orend and Richard D. Rosenblatt, Military Health Services System: Non-user and User Perceptions and Evaluations, Human Resources Research Organization, Alexandria, Va., June 1977, page 139.

TABLE 7

SOME PEOPLE SAY THAT TOO MANY PATIENTS OVERUSE THE MEDICAL CARE AVAILABLE FROM MILITARY MEDICINE BECAUSE IT IS FREE. DO YOU AGREE?

Yes, agree completely	Yes, agree generally	No, generally do not agree	No, disagree completely	Total responding
77 (14.7%)	119 (22.6%)	255 (48.6%)	74 (14.1%)	525

Source: Kenneth A. Rethmeier, "A Study of Outpatient Attitudes on the Organization and Delivery of Military Health Services," U.S. Navy Medicine, 63, January 18974, page 36.

TABLE 11

PATIENT PERCEPTION OF EFFECTIVE CONTROLS FOR MILITARY MEDICAL CARE BASED ON PATIENT PERCEPTION OF OVERUSE BY TOO MANY PATIENTS OF MILITARY MEDICINE.

Which of the following items would be best to limit the overuse of military-medical care?

PATIENT PERCEPTION OF OVERUSE BY TOO MANY PATIENTS

	Yes, agree completely	Yes, agree generally	No, generally do not agree	No, disagree completely	Total responding
Nothing will prevent overuse	28	41	58	16	143
Health-education programs	25	46	84	12	167
Financial charges	16	9	8	2	35
No attempt should be made to control it	4	10	71	36	121
Totals	73	106	221	66	466

Combining columns 1 and 2; and, 3 and 4: $\chi^2 = 60.164$ $df = 3^0$ $p < .005$

Source: Kenneth A. Rethmeier, "A Study of Outpatient Attitudes on the Organization and Delivery of Military Health Services," U.S. Navy Medicine, 63, January 18974, page 40.

APPENDIX C
SURVEY QUESTIONNAIRE UTILIZED

THIS SURVEY IS UNOFFICIAL IN NATURE. RESULTS WILL BE USED IN A RESEARCH PAPER PREPARED AS A REQUIREMENT FOR A GRADUATE COURSE IN HEALTH CARE ADMINISTRATION.

The House Appropriations Committee recently recommended that the Secretary of Defense impose a minimal charge (\$5.00) for outpatient care rendered to other than active duty personnel in military medical treatment facilities. (See Dec. 20, 1982 issue of Navy Times, pg. 3) The below questions are designed to predict what effect, if any, such charges would have on health services utilization.

1. What is your (sponsor's) status? (circle)

a. Active Duty military	d. Deceased
b. Retired military	e. Other (specify) _____
c. Retired military (disabled)	

2. What is your (sponsor's) branch of service? (circle)

a. Army	d. Marine Corps
b. Navy	e. Coast Guard
c. Air Force	f. Other (specify) _____

3. What is/was your (sponsor's) pay-grade? (circle)

E-1 E-2 E-3 E-4 E-5 E-6 E-7 E-8 E-9 W-1 W-2

W-3 W-4 O-1 O-2 O-3 O-4 O-5 O-6 O-7 O-8 O-9

4. Including the sponsor, how many members of your immediate family are eligible to receive care in military health care facilities? _____

5. Indicate, by number, the members of your family from question 4 within the following age groups:

less than 10 _____	23 - 64 _____
10 - 18 _____	Over 65 _____
18 - 23 _____	

6. Indicate your total family income: (circle)

a. Less than \$10,000	d. \$30,000-40,000
b. \$10,000-20,000	e. \$40,000-50,000
c. \$20,000-30,000	f. More than \$50,000

7. How many outpatient visits does your family (not including any active duty member) make each year (estimate)? _____

8. If \$5.00 were charged for each visit, how many of those visits indicated in question 7 above would NOT have been made? _____

9. If not otherwise required (for school, transfer, etc.), which of the following services would you NOT utilize (or utilize less) if you were charged \$5.00: (please check as many as appropriate)

Pharmacy _____	Referral to a specialist _____
Lab _____	Pediatric clinic _____
X-ray _____	OB/GYN clinic _____
Physical Therapy _____	Physical examination _____
Immunizations _____	Follow-up care _____
Minor complaints (cold, headache, sore throat, etc.) _____	

10. Indicate the number of family members from question 4 who are covered by the following types of other health care programs (if none, go to question 15):

- ☐ None
- ☐ Medicare
- ☐ School programs/insurance
- ☐ Health Maintenance Organizations (HMOs)
- ☐ Commercial insurance (Blue Cross/Blue Shield, metropolitan, etc.)
- ☐ Other health coverage (state or local programs)

11. How was the policy/coverage from question 10 obtained:

- ☐ Through employer
- ☐ Through union membership
- ☐ Through fraternal or social organization
- ☐ Individual purchase
- ☐ Through school
- ☐ Other, specify _____

12. What were your total premiums for this coverage during 1982? _____

13. How many outpatient visits did your family make under this coverage in 1982? _____

14. How much did you pay, in addition to the premiums indicated in question 12, for this outpatient care? _____

15. If given a choice between paying \$5.00 per visit in the military, using CHAMPUS as it presently exists, or using some other medical insurance plan which offered similar coverage, which would you prefer? (circle)

- a. military at \$5.00
- b. CHAMPUS
- c. Other insurance

16. If you would be willing to discuss at more length the issue of charging for military health care services, please call LT ACKLIN at 295-2269.

17. Please provide any other comments regarding utilization of military health care services should a \$5.00 fee be charged:

APPENDIX D

SUMMARY OF CHAMPUS CLAIMS FOR FISCAL YEAR 81

CHAMPUS PROGRAM STATISTICS FOR CARE
RECEIVED DURING FISCAL YEAR 1981*
ALL BRANCHES OF SERVICE

HOSPITAL	
Admissions	293,911
Days	2,614,492
Claims	326,066
Government Cost	\$538,710,106
PROFESSIONAL SERVICES INPATIENT	
Claims	648,876
Government Cost	\$164,957,408
PROFESSIONAL SERVICES OUTPATIENT	
Claims	1,794,248
Government Cost	\$134,928,254
PROGRAM FOR THE HANDICAPPED	
Claims	5,446
Government Cost	\$ 3,574,873
DRUGS	
Claims	399,969
Government Cost	\$ 14,332,299
DENTAL	
Claims	1,620
Government Cost	\$ 261,014
TOTAL ALL TYPES OF CARE	
Claims	3,176,225
Government Cost	\$856,763,954

* Includes all Claims processed at OCHAMPUS from October 1, 1980 through November 30, 1982 with ending dates of care during the period October 1, 1980 through September 30, 1981.

Source: Letter from Fred E. Hammer, Chief, Information Systems Division, Office of Civilian Health and Medical Program of the Uniformed Services, Aurora, CO to the author dated 6 January 1983.

APPENDIX E
ANALYSIS OF SURVEY RESULTS

CHI-SQUARE CONTINGENCY TABLES

TABLE E-1
VISIT DECREASE BY BENEFICIARY CLASS

BENEFICIARY CLASS	VISIT DECREASE					TOTAL
	0	1	2	3	>4	
Active duty	80 (76.85)	6 (7.04)	2 (2.93)	0	0	88
Retired	48 (50.65)	6 (4.64)	2 (1.93)	1 (.39)	1 (.39)	58
Survivor	3 (3.49)	0	1 (.13)	0	0	4
TOTAL	131	12	5	1	1	150

Numbers in parenthesis reflect expected frequencies. All others depict observed frequencies.

D.F. = 8

$\chi^2 = 10.5$, not significant even at α of 10%. Cannot conclude any association between beneficiary class and decrease in utilization.

TABLE E-2
VISIT DECREASE BY INCOME

INCOME	VISIT DECREASE					TOTAL
	0	1	2	3	>4	
< \$10,000	1 (.87)	0	0	0	0	1
10-20,000	56 (49.78)	1 (4.56)	0	0	0	57
20-30,000	31 (36.68)	8 (3.36)	3 (1.40)	0	0	42
30-40,000	26 (27.94)	3 (2.56)	2 (1.07)	1 (.21)	0	32
40-50,000	12 (12.23)	1 (1.12)	0	0	0	13
> \$50,000	4 (3.49)	0	0	0	0	4
TOTAL	131	12	5	1	1	150

Numbers in parenthesis reflect expected frequencies. All others depict observed frequencies.

D.F. = 20

$\chi^2 = 19.53$, not significant even at α of 10%. Cannot conclude any association between income and decrease in utilization.

APPENDIX F
ABBREVIATIONS

ABBREVIATIONS

ASD (HA)	-	Assistant Secretary of Defense (Health Affairs)
CHAMPUS	-	Civilian Health and Medical Program of the Uniformed Services
CMCHS	-	Civilian-Military Contingency Hospital System
DOD	-	Department of Defense
DRG	-	Diagnosis Related Group
FEHBP	-	Federal Employees Health Benefits Program
GAO	-	General Accounting Office
HHS	-	Department of Health and Human Services
HMO	-	Health Maintenance Organization
MHSS	-	Military Health Services System
MTF	-	Medical Treatment Facility
PPO	-	Preferred Provider Organization
UCA	-	Uniform Chart of Accounts for Fixed Medical and Dental Treatment Facilities
VA	-	Veterans Administration